WELLS' ELECTROPATHY.

REVISED AND

ENLARGED EDITION.

A NEW

THEORY OF DISEASE;

BASED UPON THE PRINCIPLE THAT MAN IS A COMPOUND ELECTRICAL MAGNET; ALSO

A New Method of Cure,

BY MEANS OF THE VARIOUS QUALITIES OF ELECTRICITY.

BY

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PREFACE.

THE numerous applications which have been made to the author from various sources,—and believing such a work was needed at the present day; hoping and trusting that it might render material aid to the candid inquirer after truth and facts, in this most useful and interesting department of science, are among the inducements which have prompted him to offer the present work to the public. But chiefly, the work is designed as a practical guide and reference to those who have been, and may hereafter become his pupils. Although it is not intended to exclude any and every one who may be disposed to investigate this important subject, yet it cannot be expected to be as useful in the hands of such, as though they had been regular pupils, and attended upon the author's lectures and oral instruction. The present revised and enlarged edition contains the fundamental principles of the author's *new* theory and practice of disease; yet many illustrations, ocular demonstrations, &c., which are used in the lecture-room, before the class, are necessarily omitted, as the lecture-room is really the only place where they can be fully and clearly understood; hence, although we trust the work may prove useful to all who will give it an impartial perusal, yet it will be doubly so to his students, to whom it is most respectfully dedicated. Many works have been written, and some really scientific ones, on the wonderful and mysterious agent, *electricity*. History informs us that Thales, a celebrated Grecian, of the city of Miletus, in Iona, who lived six hundred years before the Christian era, and who was the contemporary of Pythagoras, was the first

discoverer of this agent, in a substance called Amber. Theophrastus, who lived two or three centuries after, discovered that the same agent existed in Tourmaline. From this period onward about two thousand years, no farther discoveries of any considerable importance were made in this direction. In 1600, Dr. Gilbert, physician to King James I, ascertained that Diamonds, Sapphires, Carbuncles, Iris, Opals, Amethysts, Beryl, Crystal, Bristol Stone, Rock Alum, common Glass, and Stibium, or Glass of Antimony, &c., have the power when excited to attract light bodies. Towards the close of the sixteenth century, Otto Guericke made the first full and satisfactory discovery of electric repulsion. Mr. Boyle, Otto Guericke and Dr. Trall discovered the electric light at about the same time. Sir Isaac Newton discovered that both attraction and repulsion will penetrate through glass. Nearly a century since, Mr. Wesley declared concerning electricity: "It is a thousand remedies in one." To Dr. Franklin, the celebrated electrician of our own country, is due the discovery of bringing this agent from the thunder cloud to the earth, by means of his famous kite. Not only have many books on the subject of electricity been written, but many, also, on the medical uses of it; as for instance, as early as 1744, M. Kratzenstein wrote on the treatment of disease by means of electricity. Soon after, M. Jallabert, Dr. Mandnit, and the Abbi Sans, M. Cavallo, and Mr. Adams published works on the subject. About the beginning of the present century, we find works by Gale, M. Sigand de la Fond, Dr. Althous; and later still, M. Nobili, Stunheil, Middledorpff, Sarlandiere, Amussatt, &c. In 1760 we find the following from the pen of Mr. Wesley: "The Desideratum, or Electricity made plain and useful, by a lover of mankind and of common sense." Speaking of the use of electricity in disease, he says: "It is absolutely certain that in many, very many cases, it never fails. If there could be anything in nature as an absolute panacea, electricity would bid fairer for it than anything in the world; upon the whole we may pronounce it the disideratum, the general and rarely failing remedy, in nervous cases of every kind (palsies excepted), as well as in many others. What if the nervous juice itself be a fluid of this kind? If so, it is no wonder that it has always eluded the search of the most accurate naturalists." Mr. Lovett thought the electrical method of treating disease could not be expected to arrive at any considerable degree of perfection till administered by the faculty. Upon which Mr. W. replies: "Nay then, *quanta de spe decidi!* All my hopes are at an end. For when will it be admin-

istered by them? Truly, *ad graecas calendas.* (Never.) Not till the faculty have more regard to the interest of their neighbors than their own; at least, not till there are no apothecaries in the land, or till physicians are independent of them. Therefore, without waiting for what probably never will be, and what, indeed, we have no reason to expect, let men of sense do the best they can for themselves as well as for their poor, sick, helpless neighbors. How many they relieve from racking pain or pinching sickness, by this inexpensive and speedy remedy, restoring them to ease and health, generally in a few minutes, frequently in a moment! And if a few of these lovers of mankind, who have some little knowledge of the animal economy, would only be diligent in making experiments, and communicate them to each other, that each might profit thereby, I doubt not but more nervous disorders would be cured in one year by this single remedy, than the whole English *Materia Medica* will cure by the end of the century. I only wish some would consider it more deeply, and write a full practical treatise on electricity, which might be a blessing to many generations."—Wesley's Journal, Vol. 7, p. 539. More recently, works have been written by our own countrymen, as Channing, Smith, Flemming, Paige, Garratt, etc., on the medical uses of electricity, all of which contain more or less good suggestions and ideas; but as all, we think, have failed in the most important part, viz: to lay down and establish a clear, rational, and scientific theory, upon which the practice is based, hence, leave the application a mere matter of uncertain experiment with the reader, as it seems to have been with the writer; and as the attention of the people seems to be more engrossed in relation to this subject than ever, and deeming it to be of the greatest importance at this early stage of the investigation to give to the reader a reliable, philosophical basis or theory (Dr. Garratt's declaration notwithstanding to the contrary), where he says on page 4 of his work, "*Success in practice*, not theory, is our aim," upon which to predicate his practice; deeming no practice safe and reliable which is not based upon sound universal laws, are reasons also which have induced the author to present this work to the public. He has often been asked whether he is the discoverer of the theory which he teaches, where he got it, &c., and as Dr. Paige and Prof. Bolles' names have been mentioned sometimes in this connection, he therefore takes this opportunity to say, that he has read Dr. Paige's lectures thoroughly and carefully; and that some years since Prof. Bolles was associated with him in electropathic practice for some

time, during which time he became perfectly familiar with his views; and that he wholly dissents from the views of both these gentlemen, or from any and all who have yet written on the subject. Hence the subject matter herein contained, with a few exceptions, which are duly acknowledged, are in part the result of his own personal research and experimentation, during a series of near thirty years, and he alone is responsible for the truth or error taught. Let it not be supposed that in offering this work to the public, the author designs it to wholly obviate the necessity of ever resorting to the medical profession for advice or assistance; for the arts of Surgery and Midwifery have always been in vogue, and we know of no good reason why they will not continue, and as long as they do, the services of the profession will be required.

We are frequently asked whether we expect to take people without a medical education, and in one or two courses of lectures qualify them to treat disease safely. We answer, not only with safety, but success, too. We can refer to thousands of examples in proof of this; therefore, what has been done often, we believe *can* be done again. Nevertheless, we are not to be understood by this that we would in the least discountenance a thorough knowledge of Anatomy and Physiology; and to those of our students who design entering upon the practice as a profession or business, we say, such knowledge is indispensable to complete success.

We have aimed in this humble effort to present to the reader something *New*, *Important* and *True*, and tried to present it in as clear and intelligible a manner as possible. That it has faults in style, expression, &c., we doubt not, but the author would say, without vanity or egotism, that, losing sight of its faults, he believes it contains truth enough (not contained elsewhere) to justify its publication, else he would never allow it to appear before the public; and hence, we respectfully ask the reader to give it a thorough, careful and candid perusal; and if faults it has in style, remember "it is much easier to read a book than to write one;" and if it contains errors in theory, then manly and fairly meet those errors, and give us a theory that has none, remembering that truth can never be frowned into falsehood.

In conclusion we would say, we are sometimes found fault with by our brethren in the medical profession on the score of putting our instructions within the reach of those disconnected with the profession, or in not confining it to the latter. Our answer to this objection is: As a general thing they treat it as they have treated

nearly every other valuable improvement, when first introduced, with indifference and neglect, and in every possible manner endeavor to prevent their patrons from investigating it. I am proud to say, however, that there are very many honorable exceptions, as we scarcely have a class but the profession are represented. Therefore we consider it but fair and honorable, if the faculty will not accept it, to give it to the community at large, our motto being, "The greatest good to the greatest number."

W. R. WELLS.

LECTURE FIRST.

Ladies and Gentlemen:

As the subject this evening contains principles of vital importance, the comprehension of which is absolutely necessary to a thorough and clear understanding of the course—I therefore solicit your careful and undivided attention. My object during the course is not to tickle your fancy, excite the mirthful or arouse the marvelous merely, but to deal with sober, solid facts, facts which pertain to *your* interest as well as *mine*—yea, the interest of the entire race.

Much has been said and written on the subject of Electricity as a remedial agent, by the learned and scientific of *this* and *other* countries, and much use has been made of electricity by physicians of all schools; but, as *we* think, all have failed, in a great measure, to understand certain grand fundamental

laws which universally govern it in *its* application to the human system, both in health and disease; hence, we are at no loss to understand why the practical results have in so large a proportion of cases been unsatisfactory. An error in theory *must* lead to an error in practice. Our object in the present course is to give you as thorough a knowledge of both the fundamental laws that govern electricity in its application to the system, the practical workings of these laws, and also the electrical relations and polarity of the human system in its normal or natural state, as time or circumstances will permit. Inasmuch as many of the members of this class (and the same is true of all my classes) have not had the benefits of a medical education, I shall therefore avoid the use of technicalities, and endeavor to use language readily understood by all.

MAN A COMPOUND ELECTRICAL BEING.

Man is composed of two entities, *mind* and *matter:* The former invisible, imponderable, immaterial; the latter visible, ponderable, material. The former governs the latter, by *both* its voluntary and involuntary powers. As the body has no inherent power to move itself, or produce any change in itself; and yet, as it is subject to changes, as in diseased structure, also is constantly undergoing change in position—to what source, therefore, are we to look for

a rational explanation of this fact? I answer—to mind, in both its voluntary and involuntary powers on the body, acting through the medium, electricity. To illustrate the truth of our premises: A dead man cannot move or stir—why? Simply because gross, ponderable matter, in itself considered, possesses not the principle of motion, as we shall show more fully elsewhere. The mind governs the body, as we have said, by both its voluntary and involuntary powers, and this is done, not by direct contact of the two (as mind is too fine and immaterial to come in direct contact with so gross a species of matter as the physical body), but by and through another element holding a medium relation between the two, and that element is electricity, or the nervous fluid. This agent seems to be eminently fitted for the position assigned it by the great Architect, as it is the finest and most subtle of all matter (if matter it may be called) of which we can form any idea—hence, through it the mind *can* reach and govern the body.

The two brains are the fountain or electrical reservoir of the physical system, in which the electricity may be said to be stored up for the supply of the system. The cerebrum or large brain, occupying about four-fifths of the entire cavity of the skull, situated in the antero-superior portion of the head, is the seat of the voluntary powers of the mind;

and the cerebellum, situated in the posterior and inferior portion of the head, is the seat of the involuntary powers.

These, with the medula-oblongata and medula-spinalis, are the great centers of the nervous system, and from these centers, directly and indirectly, spring millions of nervous branches; so that the nervous system, as a whole, is a complete net-work, a perfect congeries, insomuch that the point of the finest cambric needle cannot enter the soft parts of the system anywhere (when healthy) without producing pain, and no pain would be experienced without puncturing a nerve. Each separate nerve, however small or apparently unimportant, is a perfect electrical magnet, and when in health, representing the two, that is, the positive and negative forces of electricity alike, or in equilibrium. Through these nerves the electricity passes through the fountain or brain to all the vicera organs, muscles, and every portion of the system, for the purpose of supplying it with that element, without which not one of its various and important functions could be performed.

We are told by physiologists that the heart circulates the blood, the stomach digests the food, etc.; but we ignore the doctrine, and conceive it to be logically unsound—else, why does not the heart of a *dead* man throb and circulate the blood, as well

as that of the *living?* There is manifestly a principle existing in the *living* that enables these organs to perform their functions, not found in the *dead*, and we do well to carefully study and, if possible, ascertain what that principle is. Why, then, cannot the heart of a *dead* man act as well as that of a *live* one? Because in the *dead* man the union of the two entities (mind and matter) is broken, and the monarch, or moving, controlling principle, mind, has taken its departure—and now, all that is left is the gross, ponderable material entity, leaving the body a unit, to be controlled by the same law that controls all inanimate matter, viz., the law of inertia.

The involuntary powers of the mind, acting through the cerebellum of the brain, send on through the appropriate nerves that element which causes the heart to throb, pulsate and move its contents, and through other nerves or channels send the same element to the stomach, thereby enabling *it* to perform the functions of digestion, and through another channel supply the liver, &c., each organ of the body being supplied from the same great source through their appropriate nerves, with the same common agent, electricity, or nervo-vital fluid, thereby enabling each of them to perform their appropriate functions. While the mind, by its involuntary powers, is thus providing electricity for all the internal organs of the body, by its voluntary powers

acting through the cerebrum and its appropriate nerves, it is supplying the same element for the purpose of maintaining animal life and voluntary motion.

We are now brought to the following question: If the brain is the great electrical reservoir of the physical system, and furnishes electricity to it in all its various departments, from whence is *it* supplied? In answering this important question, we shall take up the philosophy of the circulation of the blood. In discussing this deeply interesting portion of our subject, I must in the first place beg leave to differ somewhat from the learned and standard authors, who have written on the circulation. I cannot believe the heart, weighing only about eight to ten ounces, can exert a force equal to twenty-five or fifty tons, as taught by some writers. This is sheer nonsense, and too preposterous to merit a moment's consideration at the bar of reason or candor. Neither do I conceive it to act on the hydraulic or hydrostatic principle; but I do believe we have a more rational, common sense and consistent theory by which to account for its functions, and that is, upon electrical principles. And here we take occasion to acknowledge the assistance we have received on this point from Dr. J. B. Dodds, whose views on this subject more fully correspond with our own than those of any author who has written upon it.

We find this universal law prevails in electricity, to wit: two bodies possessing like electrical polarity repel each other; but having an opposite or dissimilar polarity they attract each other. Now let us bear in mind the fact that this law is universal. The atmosphere which we breathe is composed of two gases—one of which, the oxygen, being electrically positive, and the other, nitrogen, electrically negative; by virtue of this law they are held together, and combined in atmospheric relation. In the act of inspiration the oxygen is retained, or separated by the lungs from the nitrogen, and transmitted to the venous or negative blood, while the nitrogen is expelled from the lungs in the condition of carbonic acid gas, it being negative, and hence unfit for the purposes of life. The venous blood possessing a negative electrical polarity, and the electricity of the oxygen possessing a positive electrical polarity—now, then, the law of unlike steps in and unites them, and at the same instant changes the electrical polarity of the venous blood from negative to positive, also from venous to arterial blood, from a dark purple hue to a bright cherry color. The lungs being always uniformly in health, in a positive electrical condition, hence, by virtue of the law (likes repel), the blood must, in obedience to the law, be repelled and driven from the positive lungs immediately after being put in the same elec-

trical polarity with them—and it is thus driven, not conveyed merely, as physiologists tell us, but upon electrical principles, *repelled* from the great magnet, to wit, the lungs, they having the same polarity with itself, and through the pulmonary veins (and here I object to the term veins, as arterial blood is always found in these vessels; therefore they are arteries and not veins). The newly made arterial blood is driven by the positive lungs to the left auricle of the heart, from thence to the left ventricle, or large chamber of the heart.

At this point let us pause and ask—why does the positive arterial blood leave this chamber? Physiologists and anatomists tell us, because the muscles of the ventricle contract upon it with the power of fifty or a hundred thousand pounds, and by this means forces the blood from this chamber. I grant that were this the case, it would be reason enough for the blood leaving; but I utterly deny the premises, as too ridiculous to be believed for a moment. But we think a more rational explanation is, the blood leaves this ventricle upon the same principle, and by the same power, that it did the lungs a moment previous, to wit, upon the principle that like polarities repel, the lungs being a much *larger* and *stronger* positive magnet than the blood, and the blood yet being found within the electrical range or influence of the lungs; there-

fore, the blood *must* either leave or the *lungs* must; or the law has failed, and hence is not universal and reliable. Now, as none are disposed to doubt the validity and stability of the law, we think they are forced to the conclusion that this, to say the least, is a plausible and common sense explanation—hence we hold that they are by the principles of honor bound to either adopt it or give us a better one.

The blood is repelled (upon the principles laid down) from the left ventricle of the heart into the great aorta, or large artery of the circulating system, and through it and its numerous branches and ramifications, is thrown by the same repelling power to all portions of the system. After performing its zig-zag journey through the arterial system, and accomplishing its design, or the purpose of the great Master-builder, in the animal economy (which design we shall soon endeavor to show), it is then received into the capillary vessels, and from thence to the veins, and finally back to the right portions of the heart and lungs. Now, as the blood loses all its positive electricity which it gained in the lungs, while accomplishing its journey through the arteries, how, or by what principle, is it returned to the heart and lungs? We answer, upon the principle of the universal law—"unlikes attract." Two bodies having a dissimilar electrical polarity attract;

the larger and fixed body always attracting the lesser and movable one.

As soon as the blood has entered the vein, its polarity is changed from positive to negative, and therefore the lungs *always* remaining positive, and being the *great fixed* magnet, hence the venous blood being the *lesser movable* negative magnet, *must* be attracted to them, and not they to it. After arriving in its journey as far as the right ventricle of the heart, we ask again, why does it not remain there, inasmuch as the muscular structure of this ventricle is not nearly as powerful as that of the left? We answer, most emphatically, because of the strong electrical attraction that the lungs exert upon it, and for no other reason. Now, we promised to show one of the objects, and we think altogether the most important one, of the circulation, viz: that of furnishing and supplying the brain and whole system with the vitalizing element, electricity, which we contend it does, in the following manner. In explaining the circulation you will bear in mind I told you that the arterial blood, in its transmission through the arterial system, lost the electricity it gained in the lungs, but did not tell you what became of it, which I will now do.

We find, on examining the body after death, that the great Master-builder has provided a nerve for each artery, and most skillfully and with the

utmost precision placed them in juxtaposition with each other; but not so with the veins—we often find them unaccompanied by a nerve. I ask, would it not be well for the medical man in his post mortem examinations, to pause at this point and solve the problem? Ask himself the question, why did the Creator make this distinction? or in other words, so uniformly place a nerve by an artery, and not so uniformly by a vein? For you may be assured, however imperfect *man's* skill and works may be, those of the Almighty are *always* perfect and right. Do not pass over this lightly, and treat it as a small thing, and not worthy of your earnest attention. Be assured of this, however small a matter this may be in your estimation, it contained magnitude and majesty enough to engross the skill and wisdom of Deity. And let me say to my brethren in the profession (as some of them are members of this, and I am happy to say, of nearly all my classes), that our patrons, yea, the masses, are beginning to inquire for the reason of this, and to them, many other strange and mysterious facts. And I contend that they have an undoubted right to ask, yes, and *demand* of us satisfactory explanations. I rejoice that the time is coming, and now is, when the people are not to be satisfied with light and superficial explanations on these abstruse subjects. Vastly better for the world had they long ere this waked up

to this subject. Then true science and knowledge would have been more thoroughly understood and taught.

But trusting you will pardon me for this digression, I will pursue the subject. Let us bear in mind the fact that the nerve is expressly designed and arranged for the transmission of the nervo-vital fluid or electricity. Now, do you not perceive that where there is a nerve, there is prima facia evidence of the existence of electricity near it? Now, then, as the arterial blood contains this element, and is constantly giving it off in its passage through the artery, therefore we see the absolute necessity of a proper conductor to receive it, and as the venous blood has no electricity to impart, hence there is no such necessity for an electrical conductor, or nerves, to accompany it. The nerves which accompany the arteries are involuntary, that is to say, not under the control of the will, and have their origin in the cerebellum, or involuntary portion of the brain.

The electricity that is being given off by the arterial blood in its passage through the artery, is taken up by induction on these nerves, and conveyed to the cerebellum or small brain, *that* standing in a negative electrical relation to these nerves, but in a positive relation to the cerebrum or large brain; also to all the viscera organs of the body.

I wish you now to distinctly understand and remember another universal law of electric action, viz: When you close a circuit of electricity upon any object, the current uniformly passes in one direction, to wit, *from* the positive *to* the negative electrode; hence the positive gives off, and the negative receives the current. Do not forget this principle. The electricity thus received by the cerebellum is (a portion of it) sent on to the cerebrum, and from thence to be distributed or appropriated by the *great monarch* on his throne, or the voluntary mind, to the minutest portions of his realm. In other words, for the purpose of carrying on the functions of animal life and voluntary motion: another portion of which is retained by the cerebellum and appropriated to the various organs of the body, for the purpose of enabling them to perform *their* functions.

Hence we see the manner in which the great fountain, or brain, is supplied with electricity, and also the very important relation the lungs hold in the animal economy, viz: that of connecting man with the external world.

We will now briefly call your attention to the cause of disease, and its philosophy:

Medical men, generally, suppose that there are many causes for the various diseases in existence, and that one disease may have various causes in nature to produce it. But we contend that there is

but one grand cause for all disease, and this is, a loss of balance of the two forces of electricity in the part or parts diseased; and as this is the cause of all the convulsions and operations in nature, the same is true of the human system, where disease always begins in the finest, invisible, and ends in the grossest parts. We are aware that physicians make great account of feeling the pulse and looking at the tongues of their patients, and then assume an air of dignity and wisdom, as though by this means they understood all that is important or material to know in the case; when the facts are (I trust my brethren will pardon me for the acknowledgement) they are profoundly ignorant, having never been taught any reliable means for accurately diagnosing, and consequently possessing none, they, wishing to disguise this fact, *appear* to be wonderfully wise and far-seeing. They might, with about as much certainty (had they only been so taught) reversed the order—feel of the tongue and look at the wrist or foot—to ascertain the true condition of the patient. We say, had they only the sanction of the schools, the latter method would afford about as true an index to what exists within as the former. After thus examining the patient, they pronounce the disease to be in the liver, lungs, heart, or stomach, as the case may be, and prescribe their gross, ponderable drugs to cure. Now, ladies and gentlemen, we are

dealing with sober facts, with truth, and, as in the language of one, "we should not care whither we are led, if *she* only is our leader." What, then, are the facts in the case? Let us ever keep in mind this universal law which the Almighty has stamped on matter, viz: gross, ponderable matter has no inherent power to move or change itself. Now bear in mind, that the law of *one* particle of gross matter is the law of *all* particles and species.

A bar of iron cannot transform itself in a lump of ice. Why? Because the law by which it is controlled (viz., the law of inertia) forbids such change; but the bar of iron may, and does, undergo change and decay, because it is acted upon by a higher and more subtle element than itself. So the lungs, liver, heart, stomach, and all the material, ponderable parts of our being are governed by the same law; hence they cannot disease themselves, or effect any change in themselves, simply because they are controlled by the same law of inertia; and yet that they *do* become changed or diseased, is a fact which cannot be denied. Now, the important question for us to understand is, by what means do they become thus changed or diseased? We contend that there can be but *one* philosophical answer, and that is, in the same manner that all species of gross, ponderable, inert matter is changed, by being acted upon by that agent or element of our being, holding a higher

position than any or all of the gross, ponderable, material parts of the body, and yet standing the next step below mind, thereby being emphatically the connecting link between mind and matter; and this element is none other than the electro-nervous fluid, or electricity. This element, as we have before said, is transmitted to all portions of the physical system for the express purpose of enabling them to perform their legitimate functions. Now, when the organ or part to which this current is sent is in perfect health, the current is balanced, or represents the two forces, positive and negative, alike; but when these forces have lost their balance, too much or too little being received by the organ or part, the result is, its healthy action is interrupted, and disease is the final result. Hence we see, the physical body can no more disease or change itself than can the ocean produce a boisterous and tumultuous condition of its waters. They are both acted upon and controlled by the same law of inertia, and would forever remain at rest unless acted upon by a higher power.

We come now to consider the *rationale* of cure. And here we remark, there is *one* principle in the treatment of disease on which *all* physicians agree, and that is, to remove the cause of the disease they are called upon to treat. Having found the cause to exist in the electricity of the part or organ, would

it be rational or politic to go to work at the organ with crude, ponderable means? All unite with one accord in saying, remove the cause. But how is this to be done? We answer, not by bolus, powder, the lancet, or the use of any such carnal weapons, but by a proper understanding and use of that subtle, unseen, all-powerful agent, electricity.

When our Lord, accompanied by his disciples, on one occasion, was overtaken by a boisterous sea, the waves dashing and tumbling, insomuch that the disciples were afraid of perishing, did the Master take gross, ponderable weapons, and fall to battling the water? Nay, verily! but perfectly understanding the law which he had established, he spoke to the electricity, balanced the two forces—in other words, directed his attention to the *cause* of the tumult, removed that, and the result was, there was a great calm. Again, what would you think to see your neighbors in the midst of a sweeping hurricane or tornado, out with their scoop-shovels, brooms and crowbars, undertaking to subdue the elements by the use such means? You would say they were proper subjects for the madhouse. You would at once declare, their weapons are not appropriate to the element with which they have to contend; and yet you turn, peradventure, from this scene disgusted, pass into your domicil and undertake to do the same

thing with the furious tornado raging in the form of fever, or inflammation, and threatening to destroy one of its precious inmates. I grant you may not use the identical weapons your neighbor is using outside; but, nevertheless, you *are* using similar ones, and they are crude, ponderable, gross weapons, in the form of drugs and medicines. Now let us be consistent, and look calmly at facts. We see at a single glance that the tornado will not cease its work of destruction until the electricity in the atmosphere is balanced, its positive and negative forces restored again to equilibrium; exactly the same with that raging within. Restore the lost balance of the two forces of electricity, *then* you may look for peace and a calm, and *not* until then. "*Oh! consistency, thou art a jewel!*"

LECTURE SECOND.

Ladies and Gentlemen:

In the previous lecture we argued the *triunity* of man, or endeavored to show that he was compound in his nature, composed of three distinct principles, viz: *mind*, *electricity*, and gross, ponderable *matter*.

We also showed that mind was infinitely superior to, and controlled, by both its voluntary and involuntary powers, the body; and, because it does not come in direct contact with the body, it therefore uses the electricity as its agent, through which to execute its mandates; thereby showing the important relation that electricity holds in the economy of man. We also showed the modus-operandi by which the brain is supplied with electricity; and finally, that when the positive and negative forces of electricity in the human system have lost their balance, disease is the unavoidable result;

and that all who attempt to use this agent in the cure of disease, should understand the great fundamental laws by which it is governed; also the electrical condition of the human system, both in health and in disease.

We come now to speak, first, of the electrical polarity of the human system, in its normal or healthy condition, and the law of polarity of electricity when applied to bodies.

The brain and spinal marrow are the center of the nervous system, and from these spring, directly and indirectly, millions of branches. Now, bear in mind that each nerve is a perfect magnet, and represents a current of electricity, having, in health, the positive and negative forces thereof balanced, or in equilibrium.

The passage of electricity in the nerves, in its normal condition, is always uniform, moving in the same direction, viz: *from* the origin *to* the termination. The law of electrical polarity is this: Whenever you pass a current of electricity through a body (no matter how long or how short that body may be), it has an inward and an outward course; inward first, from the point of entrance to the galvanic center; or just one-half the whole distance it has to pass; and outward, from the galvanic center to the point of exit; hence every current has two ends, an inward and an outward. The *inward*

end is always negative, and the *outward* always positive.

You will recollect I told you in the previous lecture, that in order to obtain a current of electricity you must close a circuit upon the object through which you wish to pass the current; and this is to be done by using *both* electrodes (the positive and negative), as these represent the two ends of the current. You might apply two positives to the object, or two negatives, and you would obtain no current—and why? Simply because you have not closed a circuit. But why have you not closed a circuit? Because you have used but *one* end of the current. To illustrate: Put your machine in action, attach the electrodes, one to each terminal post of the helix. Now grasp *one*, and you get no current. Well, drop that. Now grasp the other; you still obtain no current. Why? Because you hold only *one* end of the current at the same time. Now grasp both electrodes (one in each hand), and you at once perceive that the current is passing. Why? Because you are *now* in contact with *both* ends of the current. Hence, you perceive *every* current has *two* ends, and also, that *both* are required in order to obtain an electrical effect.

You must also keep in mind the fact, that when you have closed your circuit upon an object, and consequently your current is passing, that it is gov-

erned by an immutable law in its course; and that is (as I have before remarked), *from* the positive *to* the negative electrode; and *not* from the negative to the positive; hence, just one-half of the object through which the current passes becomes electrically negative, and the other half electrically positive, these terms being used relatively. That half appearing between the *positive* electrode and the galvanic center is negative, being the *inward*, and the half between the galvanic center and *negative* electrode becomes *positive*, being the *outward* end of the current.

As the sun is the positive electrode to all the planets in the solar system, and is furnishing them with electricity, thereby enabling them to perform their respective revolutions with accuracy and precision; so the brain is, in like manner, the positive pole of the human system; hence the direction of the current in the normal condition is downward *from* the brain. The *first* half of every nerve (in health) is electrically negative; because the current is *inward*, and the *last* half is electrically positive, because the current is *outward*.

EXPLANATION OF MACHINERY.

We come now to speak of the galvanic battery; the principle of its action; also of the primary and secondary (or induced) helix current; how obtained,

&c. In order to construct a galvanic battery we use two metals, they possessing an opposite electrical relation to each other, in harmony with the law of opposites, or attraction of unlike polarities. The metals in most common use are zinc and copper. These, when acted upon, are known to be widely dissimilar in their electrical condition, the zinc being highly positive, and the copper negative. These cups are arranged as follows: The zinc cup is suspended within the copper cup, upon the edge of which it is made to hang by means of non-conducting or wooden ears. It is thus arranged in order that no metallic contact shall take place between the metals, in which case no action would be produced outside of the cups, in consequence of the circuit being closed between the metals.

After thus adjusting the cups, you are to fill the copper cup nearly full, with a saturated solution of the sulphate of copper, or blue vitriol, made as follows: To one ounce of the salt add one quart of rainwater. Immediately on filling the copper cup with this solution the action commences—electricity is being elicited or called out of the zinc cup, which cup contained it in a latent state. Now, by resorting to the universal law, unlikes attract, we are thus furnished with an explanation of the phenomenon witnessed. The zinc, you will bear in mind, is the positive, and the copper the negative metal.

The solution is also negative, holding a like polarity with the copper, but unlike with the zinc. Now, the law again;—likes repel, and unlikes attract; hence we see the action *must* be between the zinc cup and the solution; and inasmuch as we have brought *both* ends of the current in contact, we have thereby closed the circuit, and hence must obtain a current, the course of which is, *from* the positive zinc, through the negative solution, *to* the negative copper. The action in this case is as follows: The zinc is oxidized by the oxygen of the water; the oxyde combines with the acid of the salt, forming sulphate of zinc, which remains in solution; while the oxyde of copper, which was previously combined with the acid, being set free, partly adheres to the surface of the zinc cup, or falls to the bottom of the solution as a black powder, and partly is reduced to metallic copper, which is precipitated on the surface of the copper cup, or falls to the bottom in fine grains. This reduction of the oxyde to the metallic state takes place in the following manner: The water of the solution furnishes oxygen to the zinc, and thus enables it to combine with the acid, while the hydrogen, which is liberated, again forms water with the oxygen of the oxyde of copper, with which it comes in contact, leaving the metal free. Hence but little gas is given off during the action of a battery charged by sulphate of copper, as the

hydrogen which usually escapes is in this case mostly absorbed. Now, the electricity thus manufactured, is denominated battery current, chemical electricity, or galvanism, from Galvani, its discoverer, and is to be used in a certain class of disease in preference to any other kind, as we shall show when we come to speak of treatment. When the case in hand requires more current than can be obtained by a single pair, you can increase the number of pairs to any given amount required, simply by connecting each pair by means of copper wire; and here I would remark, the connecting wire should be of large size, in order that it may convey *all* the electricity generated. There are two methods of connecting your series; one is by connecting the zinc of one pair to the copper of the the next; the other is by connecting all the zincs together, and all the coppers together. The results obtained by these two modes of connection are entirely unlike, e. g.: By the former method the current possesses the power of decomposing and recomposing substances interposed within its passage; whereas by the latter method the current possesses more heating and magnetic properties. The helix is a coiled wire, through which we generally pass the current from the cups, or battery, before it comes in contact with the patient. The

coil which we use is composed of a double helix, the inner, of coarse, and the outer of fine wire; and these are so constructed as to have no metallic contact, the one with the other—hence by this means we are enabled to obtain two distinct, separate currents, as you will perceive when we come to treat of disease.

The internal or coarse wire terminates at metallic post marked P, which denotes the primary or first current, coming from the battery; hence, with the switch placed on P, you obtain the current direct from the cups or battery, as there is no metallic interruption from the battery to the patient. The sensation of this current, you will perceive, is very light and pleasant, and hence is well adapted to the more sensitive parts of the system, as the head, eye, ear, &c. It also possesses qualities different from the current proceeding from the fine wire; in that it partakes more of *electricity*, and less of magnetism. The secondary, or induced current, is obtained by removing the end of the switch from the post marked P, to S, which denotes the secondary. This is obtained by the current first passing through the coarse wire, and from thence to the fine wire; but as there is no metallic connection between these wires, therefore the fine wire receives it by means of induction. This current possesses less electricity and more magnetism, as there are several hundred

yards more magnet through which the current has to traverse before reaching the patient. The centre of the helix has an opening for the reception of a bundle of soft iron wires (called the plunger), by means of which the current may be regulated.

The terminal posts of the helix marked P and N are its poles, and denote the positive and negative, or the two ends of the current.

DIRECTIONS FOR RUNNING THE MACHINE.

Place the zinc cup within the copper, suspended on its edge by its wooden ears. Be careful that the cups do not touch at any point. Connect the cups by means of copper wire to the two posts belonging to the helix standing opposite the screw cups of the battery. Now, introduce the entire length of the plunger within the helix. Finally, turn the thumb-screw (over the yoke) until the lower end forms contact with the armature of the magnet, then the vibration will commence. Fasten the thumb-screw at this point, by means of a bur resting on the yoke.

Your machine is now in good action, and to keep it so you should observe the following particulars: Keep the strength of your solution good; also the entire surface of the zinc cup must be kept clean, and free from the coating which surrounds it during action. Be careful and have the ends of the connecting wires, and also the cups receiving

them, clean and bright, as well as the posts marked P and S, also the ends of the magnet; these being soft iron are exceedingly liable to rust; this must be seen to; and finally, keep the machine, in all its parts, clean and bright, and it will run well for fifty years, with the exception of the zinc cups, which must of course wear out, being subject to constant decomposition during the action. This can be replaced at trifling expense at any time.

CHEMICAL LAW OF ELECTRICITY.

By chemical action, we mean the power which electricity possesses of changing the structure of organized matter—the power of decomposing and recomposing the hardest substances in nature, changing them from their organic to their elementary form or condition. It is now a conceded fact that there are no substances in nature that can fully resist the decomposing power of a current of electricity. This quality of electricity is obtained by means of the cups and solution, disconnected from the helix, and is pure electricity, which it must be, in order to possess those qualities which are assigned it. The amount of decomposing power is proportioned to the number of pairs and manner of connecting them, as we have before said. This quality of electricity differs vastly from that procured by passing the current through the helix, as can be

shown by various experiments, one or two of which we will name. Take a solution of acetate of lead, pass the current through the helix, and let the electrodes terminate in the solution, and you will not affect it in the least. Now disconnect the cups from the helix; attach one electrode to the copper and the other to the zinc cup, and let them terminate as before, in the solution, and it will soon be changed; the oxygen appearing on the electrode coming from the positive or copper cup, and the base of the metal on the negative or zinc electrode. We also see in this the course of the current; which is, *within* the series, the current is *from* the zinc *to* the copper; and *without* the series, from the copper back to the zinc. Please bear in mind, that the shorter your electrodes are, through which the current has to pass after leaving the battery, the more perfect and powerful will be the chemical action of the current; and this is owing to the fact that the conductors become magnets; hence, the shorter they are, the less magnetism, and more electricity does the current possess. Again, water cannot be decomposed by the helix current, and yet is readily by the battery current. The same is true of all bodies or substances.

This fact furnishes us with an important key in relation to the proper application of the various qualities of electricity in the cure of disease, to wit:

In cases of extraneous growth, excrescences, &c., as cancers, tumors, cataracts, opacities, and the like, which are to be removed, we must not expect to gain our object by means of the electro-magnetic current or helix current, but use the pure chemical, galvanic current; because, as *this* alone has the power to decompose, and the helix has not; therefore, this is most clearly the current to be used. We have often been amused by persons wondering if we could cure cancers, tumors, cataracts, &c., with electricity; as though these substances could resist and bid defiance to the power of electricity; when at the same time they may be well aware of the fact that it can decompose the metals rapidly, although much harder than *these* substances. The fact is, the world is too ignorant concerning the laws governing this wonder-working agent. When they shall come to be more perfectly understood, and men dare to step aside from the old beaten tracks of their forefathers, and think and reason for themselves, independent of the belief or unbelief of others, then will many things which to them appear wonderful and mysterious, be looked upon as common matter of fact transactions; and we rejoice in the thought that the world are beginning to dare to investigate for themselves.

MECHANICAL LAW OF ELECTRICITY.

Electricity acts mechanically upon objects in the following manner; In passing a current through a nerve or muscle, its tendency is to contract one-half of the distance, and expand the other half; the *contraction* always appearing in the inward or negative half, and the *expansion* in the outward or positive half of the current. The *expansion* of the outer half is in an exact ratio to the *contraction* of the inward half; so that the absolute length of the muscle or nerve is not changed, only the relative parts. We see this principle of electricity illustrated in various ways, in nature, every day and hour of our lives.

For instance, let a board lie in the sun, and in a short time it is warped or curved; the side or surface toward the sun becomes contracted, while the other is expanded, clearly demonstrating the law: The *inward* end of the current contracts, while the *outward* end expands. Again, notice the vessel on the water, while the bow or head opens, radiates and expands the water, the stern or tail closes, contracts in the form of an eddy. Again, shoot a ball through a board; where the ball entered, the hole or orifice is quite small, compared with that on the other side, where it passed out. The reason of which is, the *head* of the current expands and the *tail* contracts. We see the smith heat his tire pre-

vious to adjusting it on the wheel. Why? Simply because the head of the current (which is heat) expands, and as his object is expansion of the whole tire, he therefore brings the *whole* under the action of the head of the current. After adjusting it (while in this expanded condition) on the wheel, he then cools it for the purpose of contracting, and consequently now brings the other end, viz., the inward or negative end of the current to bear upon it. Now, what does all this mean? or has it no significance at all? Do you not perceive it points directly to this principle, to wit: that the *inward* end of the current uniformly contracts, and the *outward* end *as* uniformly expands? We are to use electricity with a view to its *mechanical* action, in cases of deformity, curved spine or limbs, crooked eyes, prolapsed organs, contracted muscles, etc., the *particular mode* of which will be given when we come to treat of these conditions.

LECTURE THIRD.

Ladies and Gentlemen:

The subject for our consideration this evening is general, and special Pathology, and Diagnosis. The term pathology is taken from two Greek words, pathos, or disease, and logos, meaning discourse or doctrine of.

In all the vast researches and investigations of medical men in the department of medicine, many have been satisfactory and scientific, yet this department has remained an inscrutable mystery. That man is a subject of disease, pain or death, needs no more proof than the world has had during a period of almost six thousand years past. Witness the "Pale Horse and his rider," assiduously doing his terrible work of carnage and destruction to the race; never satisfied, but ever pressing on as if eager for prey and plunder; and

then ask not: Are disease and death a reality? The whole world (medical men as well as others) unite in declaring this to be a fact. Medical men not only know that man is a victim of disease, but they know to a certain degree of what his lower entity, his ponderable, material part is composed. Anatomy and physiology have furnished them with the means of accurately knowing and understanding many important facts concerning the ponderable, material part of our being; as, for instance, the number of bones and muscles of which the body is composed; their texture and uses, also the various organs and parts which unite to make up the sum total of the physical structure: when chemistry comes in to inform us of what all these things are composed chemically; all of which knowledge is proper and valuable. But where, I ask, is the medical school to be found that teaches us of *man*, in his higher and nobler being? in fine, of *mind*, that first, grandest, and most elevated principle of our being? That which controls and governs the lower, material or physical part; and upon which it is dependent, and by which it is supplied with that element which enables it to perform all its functions and operations in life? Again, we ask: where is the school that has given us a rational and intelligent exegises of disease? I am aware that such an interrogatory, however honestly made, may be received by the

profession with sneer and contempt; and perhaps by many may be thought to be uncourteous and irrelevant; but as we advertised you in the outset, our business is to search after facts, *sober* facts and *truth;* we should not be too much concerned where we are led; only that *she* is our leader.

That much has been written, and great pains taken, by our schools, to instruct the pupil on the subject of pathology, we are well aware; but that the question — what is disease? — has been fairly, frankly, accurately and scientifically answered, we *do not* believe.

Authors and teachers have attempted to solve the mystery; some in one way, and some in another. Prof. Dunglison defines it thus: "An opposite state to that of health, consisting in a change either in the position and structure of parts, or in the exercise of one or more of their functions, or in both." Now we contend that this is not a definition of disease, but of the *effect* of disease. We hold that disease is an unseen, hidden reality, lying back of the effects, which *only* are to be seen and are tangible. In order that you may the better understand our explanation of disease, we will in the first place define health. Health, when applied to mankind, is a perfect balance of the two (positive and negative) forces of electricity pertaining to the man. The legitimate results of which are, a proper and com-

plete performance of all the functions of the animal economy. The same is true when speaking of a single organ or part.

Disease, on the other hand, is a *loss* of balance of these two forces, and may be confined to a single organ or part, or may embrace the entire person; the results of which become visible and tangible, to both the patient and beholder; and is manifested in various ways; as, in either a partial or total suspension of the proper functions of the part diseased; or perhaps, in some instances, *first* an over excitement, and afterwards a suspension. It also manifests itself in pain, distress, or agony, and in decomposition and death.

Diagnosis: This is that branch of medicine, the object of which is the discrimination of diseases. It is one of the most important branches of general pathology. The first duty of the physician, on being summoned to the bed-side of the sick, is to ascertain the true condition of the patient. Before placing you in possession of a scientific and reliable method (as well as rational), we will briefly review the popular and usually practical one; and then submit the two for your decision, you being jurors in the case. Now, ladies and gentlemen, in presenting this picture to you, I shall endeavor not to mislead, or color too highly; but simply to give you a scene of every day's occurrence; to which not only my-

self, but every other physician, and yourselves also, have been eye witnesses.

The patient is sick, the doctor is called; and what follows? *Enter first scene.* The doctor feels the wrist (perhaps pulse); looks at the tongue; shakes his head; after which a dialogue ensues, thus: Doctor—

Question. "How long have you been ailing?"

Ans. "Three or four days," or weeks, as the case may be; "in fact I have not been well for a long time."

Q. "Are your bowels regular?"

Ans. "Not very."

Q. "How often do they move?"

Ans. "Some times once a day, and some times once a week."

Q. "Have you any nausea?"

Ans. "Some times."

Q. "Any pain in the region of the stomach, or bowels?"

Ans. "Some times dull pain in that region."

Q. "Any pain in back, or head?"

Ans. "Back feels tired most of the time."

Perhaps the doctor feels the pulse, and looks at the tongue again, and thus he proceeds until he is satisfied what is the condition of the patient. Ah! did I say *satisfied?* Nay, verily. In my judgment, no honest, judicious, candid and intelligent physi-

cian is *ever satisfied* of the condition of his patient by the above or any other mode of examination within his knowledge; and hence, he is doomed to *guess*, *suspect*, and take a leap in the dark; and that, too, at the very outset, when a failure here may be, and often is, attended with fatal results to the patient. Now follow that doctor (if honest and candid), and penetrate the inmost recesses of his mind, and witness the following soliloquoy: "Oh! the uncertainty of our method of diagnosis. At the best, it is mere *guess* work, and, in the language of one of the eminent of the fraternity (Dr. James Jackson, Jr.), 'When shall we ever get to a solid bottom? Shall we ever have fixed *laws* and principles, or must we be forever doomed to hang our heads—to guess, to suspect?' Or, in the language of another, either Dr. Rush or Waterhouse, I think, 'Our system of medicine is in the highest degree uncertain, except that we have already destroyed more lives than war, pestilence and famine combined.' "

We are to bear in mind that these are confessions from those occupying high positions in the profession. Now witness the second scene: The patient perchance does not improve, but declines; and then medical gentlemen, of supposed talent and skill, are summoned in consultation. After availing themselves of the best means within their

reach for a thorough examination, they proceed; accomplishing which, peradventure, they retire for a private consultation; the result of which is somewhat as follows:

Dr. A., from *his* examination, is pretty well satisfied (guesses) that the chief difficulty is in the liver. Dr. B. attributes it to the stomach. Dr. C., differing a little, places it in the spine. Dr. D. is of the opinion it is in the bowels, while Dr. E. regards the seat of the disease as being in the womb. Dr. F. takes higher ground, and places the disease *proper* in the head; and regards all the other sufferings as sympathetic. Now, ladies and gentlemen, this is no fancy or imaginary sketch; but a real, actual every-day occurrence. One guesses, another believes, the third thinks, the fourth is of the opinion, the fifth is inclined to think, the sixth is pretty well satisfied; not *one* daring to assert positively, or if he does *assert* not *feeling* positive—without a doubt in the case.

Why is there so much mystery and uncertainty connected with this, the most important of the healing art? Is it probable that the great, good and wise Disposer of our being should make us susceptible of, and place us where we would be constantly exposed to various forms of disease, the result of which, in a large proportion of instances, is death, and, at the same time, place within our

reach no surer means of apprehending those diseases? We cannot, nor will we for a moment, indulge the belief, for this, in our opinion, would be charging God with superlative folly—yea, worse, absolute injustice. But the whole difficulty lies in the fact, to wit: God has created certain immutable laws, by which man is governed, but man has failed to apprehend and understand those laws; hence, he is groping in darkness and ignorance, believing himself and the race to be a mystery of mysteries, infinitely past his powers of comprehension; and is, therefore, content to know a few things pertaining to the gross, animal part of his being; while the great fundamental laws of life, health, disease and death, are but little understood and taught, even by our schools of medicine, and thus, occupying in a certain sense the position of the Scribes and Pharisees, paying tithes of mint, anise and cumin, and leaving the weightier matters of the law, such as mind, and the modus operandi of its operations on the animal economy, etc., to a fearful degree untouched.

Now, ladies and gentlemen, we will pursue these gloomy and foreboding realities no farther, but invite your attention to A THEORY of diagnosis having for its basis principles as immutable as their Creator.

When we consider man in the light in which our subject now stands—as an electrical being,

composed of mind and matter, and that these are connected by a third and intermediate principle, viz., electricity, and that each nerve in the human system is a magnet, under the control of the same law of the positive and negative forces of electricity that all magnets are; and, also, that all the manifold operations in the physical system, are carried on by the mental operating through the electrical; also, that when these two forces are balanced, health of the body is the legitimate consequence; but, when they have lost their balance, disease must be the unavoidable result—thus making electricity both the cause of health and disease.

Do you say this is impossible? No more so than that oxygen and nitrogen, when combined in certain proportions, should constitute healthy atmosphere, and, in other proportions, a deadly poison. I say, when we consider man in *this* light the theory of diagnosis is resolved to two points, viz.: First, of ascertaining the particular part of the system that has lost its balance; and secondly, to know in what consists the loss.

Before proceeding to give the method of examnation, or diagnosis, it may be necessary to remark, that in health all parts of the system are not equally susceptible to the current; the cerebrum much more so than the cerebellum; also, the serous surfaces more so than the mucus. This fact

should be borne in mind, as otherwise you might be led into error in your examination. We come now to the specific directions for diagnosis. First, put your machine in action with switch on P; attach the insulated sponge to the positive electrode, wet the back and front of the neck, place the positive wet sponge over the first cervical vertebræ, or upper portion of spine; make firm pressure; then grasp the negative electrode in the other wet hand; and with the point of a finger of the same hand, make touches in front about the throat. I would here remark, your touch with the finger should be uniform; while it is not hard enough to hurt or annoy the patient, yet it should be firm and even. After a proper examination of this part, lower your positive sponge from one to three inches; now moisten the surface over the trachea, and upper portion of chest; and make your examination in that region; and thus pass on through the entire body; keeping the positive on the spine, and a little above the parts you are examining, in order that the current may follow the course of the nerves. You will seldom find the primary current of sufficient intensity for the purposes of diagnosis, unless it be in extremely sensitive persons; therefore, after commencing your examination, and thus introducing the patient to the current, you should turn the switch on the post

marked S, which gives you the secondary or induced current; the passage of which, through various portions of the body, produces sensations and feelings in the patient, varying according to the strength of current used; also, according to the existing electrical condition of the parts through which it passes. Explanation: When an organ or part through which the current is made to pass is electrically balanced, it may be sensibly felt; but will not be at all painful; whereas, if the part is surcharged, which is equivalent to being electrically positive, the same current produces more or less pain, in proportion to the positive condition. On the other hand, if the organ or part has *less* than its natural quantity, thereby rendering it electrically negative, the same current produces little or no sensation, in proportion as the organ is more or less devoid of electricity. To illustrate. Now then, suppose in the midst of your examination, the patient starts suddenly, from pain produced by the current; again; suppose he is a little roguish, and starts *not from actual hurt*, but in order to lead you astray and deceive you; your remedy is at hand. A case in point occurs to my mind, which I will mention.

While lecturing in Syracuse, N. Y., a gentleman came into my office, saying he understood I claimed to detect and locate diseases without asking the

patient any questions. On being informed that he understood correctly, he desired to put my skill to the test on his own case. Before commencing the examination, I explained to him the sensations he would perceive on passing the current through healthy parts (which should always be done); I also gave him the privilege of reporting at any time, when the current should be painful or unpleasant. He replied, that he did not come to tell *me any* thing; but to have me tell *him;* accordingly I commenced my examination with a light secondary current; he, feeling no unpleasant sensation. I had not progressed far, when on touching a certain point, exactly as I had touched the adjacent parts, he sprang with all his might. Not knowing but he might be trying to deceive me, I assayed to make another touch at the same point; when he exclaimed, "for heaven's sake, don't touch me there again." I passed on with my examination, in the course of which, I (unexpectedly to him) made another touch on that point; when he fainted instanter and fell on the floor. I then lessened my current (by withdrawing the plunger), and switching on the primary, and touched the point again, but found it so susceptible that he could not bear even a light current, when the *same* current would produce no sensation at other points; neither would the *same* touch produce any sensation at this point without the current.

Now what is the explanation of this phenomenon? Simply, that there was existing a positive electrical condition, or in other words, there was irritation, and inflammation of the parts, and hence, in passing a current through the part, the irritation was increased, and pain the result.

After having completed your examination from the throat to the pubic bone, embracing the entire front portion of the body, then seat the patient on the negative, and after wetting the spine, carefully examine that in its whole length, with the positive electrode; and I would here remark: All patients will bear a much stronger current on the spine than on any other part, hence you are to increase the strength by means of the plunger, and as most patients will bear more than you can handle with your finger, you may attach the electrode to the insulated sponge; and examine the spine with that, in such cases. The spine examined; next wet the head thoroughly (bear in mind, that dry hair is a poor conductor). Now, switch on the primary current, withdraw the plunger, the patient seated on the negative, you holding the positive in one hand, and with one finger of the other, make your touches all over the head, as you did on the body, keeping in mind that the cerebrum or front brain is naturally much more sensitive to the current than the cerebellum, or small brain; hence, you are to

regulate the strength of your current accordingly. Perhaps *this* question may arise in your minds: How are we to know, when a part is in a negative condition? I have given you the means of knowing above; to wit. The more negative an organ is, the less it is susceptible to the impression of the current. But a still more grave and serious question, may arise in your minds, viz: Suppose we *do* find an extremely positive or negative place; how shall we, who are comparatively ignorant of the anatomy of the system, know or be able to decide what particular organ or part is involved; or what particular *name* to ascribe to the disease? In answer to the first part of your interrogatory, I would say. Although a thorough knowledge of the anatomy of the system might be to you very interesting, and often exceedingly profitable, and useful, yet it is not by any means absolutely imperative, in order to arrive at the *facts* in the case. But *one* thing *is* very important for you to know; and that is, which side of the galvanic center the disease is found: else, though you may be able to find it, or know that it existed somewhere between the two electrodes, you would not be able to intelligently polarize or cure it. Those of you, who are not medically educated (and many who are), will need to depend somewhat on the patient to decide this point. As they are always able, not only to feel the amount of

pain or hurt, but tell you very nearly the exact point.

In reply to the last question, I would say: It is not at all necessary to the cure, that you are able to say, the disease is cynanche trachealis, Angina apthosa, vel pectoris, Otitis, Ophthalmia, Pericarditis, Endocarditis, Gastritis, Entritis, etc. All this is mere subterfuge; and prating about names that have no practical value to the suffering patient; resorted to in order to cover up and disguise the ignorance that prevails, in relation to the great and important facts pertaining to the REAL condition of the patient; and at the *very time*, too, while the sharp sickle of disease (not technicalities) is being thrust into the vitals of the poor sufferer, and he being swept from time to eternity.

Had the profession labored one-half as assiduously, and spent one-tenth the time, to *know* and *understand* the true nature of disease and rationale of cure, that they have in forming nomenclatures, far better had it been for the world; and, we think we hazard nothing in saying, that millions of precious lives might have been saved, which have been sacrificed. Good God! what an awful account to be settled!

LECTURE FOURTH.

ELECTROPATHIC TREATMENT OF DISEASE.

Our Nosology will embrace the following general classification, viz: Positive and negative diseases; which classification comprises the sum total of all the diseases incident to the human family; and these are subdivided into what we shall denominate healthy and unhealthy diseases.

These terms may appear somewhat arbitray, but, we trust we shall be able to show you that they are founded in reason and fact. Under the term positive disease we include those which possess a greater share of electricity; while negative denotes a less amount than the organ or part possesses in a state of health.

By the term healthy, in the sub-division, we mean those diseases which do *not* partake of a malignant or poisonous character; whereas, on the contrary,

unhealthy disease possesses this characteristic. It will scarcely be expected, in a work as limited as we propose to make the present, that we should enter into a detailed account of all the technical appellations ascribed to diseases in medical works; and, so far from considering it to be necessary to the student's success, we believe it would be a hindrance, and seriously militate against it, by tending to burthen the mind with an endless mass of subterfuge possessing no practical importance whatever. But, we shall content ourselves by bringing before the mind a sufficient variety under each head, to enable the student to understand their true condition, and philosophy of cure; understanding which, he will readily perceive, by analogy, the condition and rationale of cure of others not found in this work.

Under our first general head, or that of positive disease, may be found the following conditions: Active inflammation, whether general or local; fevers, &c. Under the the second head, or negative disease, may be found paralysis, either partial or complete. We use electricity in the treatment of disease with reference to its polar, chemical and mechanical laws (which laws you will find explained in a former lecture), and use it in the form of either general or special treatment. General treatment is to be given when we wish to bring the whole body

under the impression of the current; and special when we wish to act upon a particular organ or part only; for you will please bear in mind that the current goes where it is sent and no where else. We have often been astonished to hear men, making prentensions to science, yes, and even physicians claiming to know all about the use of electricity, too, raise this objection: "You cannot confine electricity to any particular place. It is diffusive in its nature. The moment you touch the patient at any point it diffuses itself through the entire system alike." And, as astonishing as it may appear, many of them are so ignorant as to suppose, that if only *one* electrode is brought in contact with the patient, he will receive a shock.

As well might we argue that when a thunderbolt strikes *your* dwelling, the same instant it strikes *mine* and every other dwelling on our planet. You see at a glance how ridiculous the idea.

GENERAL TREATMENT.

There are two methods of administering general treatment, and two objects to be attained: one of which is the reduction of vital forces, and hence depletion; the other is an increase of these forces, and hence a tonic; and these various results are obtained in accordance with the different methods of administering

The positive pole always reduces, because, as we told you, it gives off the current from the part where applied; while the negative tonifies, because it receives the current. It is exceedingly important that you keep this fact in mind, as an error here might often lead to serious results in practice. To give the antiphilogistic, or depleting general treatment: Seat your patient on the negative pole, and with the positive pole enclosed within a soft, wet sponge, manipulate the entire surface of the body with the secondary helix current; or, place the negative at the feet in water, and manipulate as before. By thus treating, you will reduce the patient in proportion to the strength of your current and the length of time you treat.

The other method is: To place the positive pole at the points where the negative was in the above process, and manipulate with the negative pole. By this method you produce the opposite effect. In manipulating, your passes should always be made downwards, so as to avoid interfering with the lamina or scale with which the cuticle or outer skin abounds. Your passes should also be firm and even, with a broad sweep. But, before commencing, test the strength of your current as follows: Your patient, being in contact with one electrode or end of the current, and you, holding the other in one hand, with a finger of the other

(wet) touch the patient, at which instant you close the circuit, and hence the current is established. By this means you are enabled to ascertain the exact amount of current you have, which knowledge is essential, as otherwise you might shock the patient, which should never be done in any case. After thus testing, commence your manipulating, first with light pressure, in order to accustom the patient to the sensation, after which, gradually increasing your pressure until it is firm and steady. After treating the spine and back, wipe dry and pass to the front and upper portion of trunk. Now, lessen your current by means of the plunger, and commence with a light pressure, as before, increasing gradually. Treat the chest and wipe dry before treating the abdomen, and thus proceed with the entire patient, the whole occupying from ten to thirty or forty minutes.

POSITIVE DISEASE.

The first condition we shall name under this head is Apoplexy.

Our first duty is to understand the nature of this disease, hence we ask the question, what is apoplexy? Suppose we go to the standard text books of our medical schools, and we receive the following answer: "Apoplexy is derived from a Greek word, which signifies to strike with violence.

An effusion of blood which occurs suddenly in the substance of an organ or tissue; and when applied to the brain, as it generally is, it is characterized by diminution, or loss of sensation, and mental manifestation; by the cessation, more or less complete, of motion, and by a comatose state. It consists in pressure upon the brain, either from turgescence of vessels or from extravasation of blood." Now this is a very correct definition of the *effect* of a certain cause, which is the disease lying back of all this; but we contend it falls very far short of explaining the disease.

Suppose we ask for the philosophy of the blood going to the brain in this unusual quantity, what is the reply? That it is natural for the heart in apoplexy to throw the blood thus, hence carrying the idea that the heart is possessed of a great deal of intelligence. Now if the heart possesses such power, why does it not produce apoplexy semetimes in the dead man as well as in the living? for it is as actually a substance in the one case as in the other. Who ever heard of such a phenomenon?

Now, ladies and gentlemen, the facts in the case are these (as facts are what we are dealing with.) In this case, as in all others, disease or the reality begins in the finest and ends in the grossest or material physical parts; hence, the disease is hidden, unseen, but the effects are seen and tangible. To

illustrate: observe the phenomena of vegatation. The grain of corn sends out its roots, and finally its ear and fruit all arrive at maturity, decay and perish. Now all these are but the effects (and are tangible) of an unseen, hidden reality. Exactly so with the case under consideration. The explanation pertains only to the *effect* of a certain cause, concealed, hidden, which we do well to investigate and if possible understand. In apoplexy the disease is a loss of balance in the positive and negative forces of electricity in the part or parts concerned.

This loss of balance may be occasioned by either mental or physical impressions from without. Now the question arises: What magnet or magnets, part or parts, are in this case concerned? We answer the whole compound magnet, or the entire body; but especially the brain. Secondly: In what consists this loss of balance? Answer: The brain (as I told you in a previous lecture), which in health should be and always is electrically negative, has now become positive. It is surcharged with electricity, and this occupying a higher position than the gross, ponderable blood, and also holding a dissimilar or opposite electrical relation to it, viz: it being positive and the blood negative (relatively). Now by virtue of the universal law, unlikes attract, therefore the blood (more particularly venous) is attracted to this organ, and continues to accumu-

late occupying either a longer or shorter period of time; until this quantity is so great as to produce compression and collapse of the organ when the above symptoms appear. The surface and extremities which in health are electrically positive, have become in this case negative; as is indicated by the coldness which is usually a concomitant symptom in these cases. In fine, taking the case as a whole, in lieu of the current passing from the brain downward and outward, as it uniformly does in health, it is now reversed, or passing upward and inward.

Having explained the real condition of the case, we are therefore ready to proceed to its treatment intelligently; the philosophy of which is to restore the balance of these positive and negative forces to their wonted equilibrium throughout the entire magnet or system. Reason and common sense would teach us that the nature of our remedy should be as subtile as is that of the foe we have to meet. The object to be attained is simply this: To make the magnets in the system point in the opposite direction, making the inward ends point outward, and vice versa; in fine, to polarize the case. By referring to the second lecture you will see the law of polarity explained. The manner of proceeding in this case is as follows: Place the patient's feet in a dish of water (warm if at hand), into which put the negative electrode with the positive inclosed

within a soft wet sponge, commence your treatment with light secondary current; first treat the spine, embracing the whole length with each manipulation, rubbing briskly; after treating this one or two minutes, increase the strength of the current by means of plunger, and continue your treatment on the back and whole surface of the body, but mainly on back, five to twenty minutes. At the end of which time, if consciousness does not return and the patient begin to arouse, then wet the head (thoroughly), switch on the primary (light current), for a few moments, after which increase until you have entered the plunger its whole length, which you will perceive will *then* be a lighter current than if it is withdrawn on the secondary. Treat thus from three to ten minutes if necessary. You will scarcely ever have occasion to treat the head in these cases more than two minutes, and in many, consciousness returns by merely treating the spine. A case in point occurs to my mind: A few years since a gentleman in the meridian of life was struck down instantly with apoplexy; medical aid was called immediately, and every means within their power was brought to bear in the case, all of which proving no avail, a consultation was had, which resulted in the decision that the patient could not live to exceed twelve hours. The attending physician knowing of a certain student of mine not far distant, who had

accomplished some (to him remarkable) cures, dispatched a message requesting him to come immediately to the case. On arriving, he found the patient perfectly insensible and comatose, extremities and surface cold, head, face and neck in a perfect state of turgidity. On being informed by the medical gentlemen that they could not by any means within their knowledge save the man, and that he would not in their opinion live but a few hours longer, wished if he could do anything to do it. Accordingly he commenced the treatment according to direction, when, after treating about fifteen minutes, consciousness began to return; and at the end of thirty minutes the man was perfectly sane and rational; and in a few days was restored to his natural health and vigor. In the treatment of apoplexy you are to be careful, or in your anxiety to relieve the patient you may be liable to carry it so far as to injure by exhaustion; hence you should observe the following rule: When consciousness begins to appear, desist; keeping close watch of the patient, and when fully restored to sanity, discontinue your treatment altogether. Now let us briefly review this case and ascertain if possible why those physicians could not reach it. For two reasons: first, they had no clear and definite idea of the real disease, only understanding the *effects*, hence their whole efforts were aimed directly at these. The

effects being manifested in the gross, ponderable blood, and other portions of the material system, they, accordingly, assailed them with like gross weapons; but the condition or actual disease being far more subtile and imponderable, could not be reached by any such weapons, but required one as subtile in its nature as itself. Electricity being such an one, hence when that was brought to bear, in conformity with certain established laws, the disease was made to yield, and that yielding, the effects must of necessity cease.

OPTHALMIA, OR ACUTE INFLAMMATION OF THE EYE.

I wish here to call your attention to an important principle, which you should by no means lose sight of, viz.: In treating a positive disease, if it is *internal*, you must so arrange your electrodes as to make it appear between them, making it appear, of course, within the negative half of the current, or between the positive electrode and center of the two. You should seek, also, to run the current through the least important organs or parts possible. In this case, the disease is usually confined to the more external parts of the eye; hence, your treatment should be external. Before commencing the treatment we must understand the real nature of the case, which is: a loss of the balance of the

two forces of electricity in the magnets or nerves of the parts concerned; secondly, the loss here, as in the case of apoplexy, consists in a superabundance of electricity. This, standing in a positive, and the blood in a negative relation, and the blood being subordinate to it, therefore the blood, in obedience to the immutable law of unlikes, is attracted to it—the electricity being the fire, while the blood is the fuel; hence, when united, combustion is the natural result, and hence, also, the philosophy of pain, redness, unnatural heat, etc.

TREATMENT.

The object in treatment is to balance the electricity, or, in other words, remove the cause, when the effects will cease. In this, as in many other local diseases, the patient may need more or less general treatment, to accompany the special. If so, you should give the outward and downward current. For special treatment, you will find in most cases, the primary current of sufficient strength, and the best adapted to the case. First, then, after putting your machine in action, inclose the negative electrode in a wet sponge, and let the patient hold it in the hand corresponding to the side with the eye under treatment. The operator, with the positive enclosed within a very soft sponge, treats all about the region of the eye,

occupying from two to ten minutes. After thus treating, once or twice a day for a few times, if the disease does not yield, you should then attach the positive to the eye instrument, filled with pure water, into which the eye is to be placed, directing the patient in holding the instrument, to grasp it by the wooden or insulated portion, in order that he may not divide the current, while the operator, with the negative electrode, treats the back of the neck and spine with such a current only as is pleasant, or at least not painful to the patient. From three to five minutes, at each time, is long enough, repeated as often as the case seems to require, seldom, however, more than once a day.

CYNANCHE TONSILARIS, OR QUINSY.

This is characterized by inflammation, redness and swelling of the throat and tonsils, and is the result of a positive condition in the magnets or nerves of the part. The indication is to reverse the polarity or balance the electricity. In this case, you should intersperse general with special treatment, as the whole system has more or less lost its healthy balance, the tendency of which is for the current to point inward, in place of outward, as it does in health; hence you are to seat the patient on the positive, and with the negative treat the entire body as high as the diaphram, using a good current;

after which attach the curved throat instrument to the insulator, and this to the positive electrode. After tying as large a sponge on the ball of the instrument as the patient can well introduce into the mouth, wet and direct him to pass it in the throat as far as practicable. Now the operator, after lessening the strength of current, with the negative treats the spine first, directing his main efforts to the cervical vertebræ, and finally following the whole length of the spinal column. There are few points in the treatment of this case worthy of note. First: The enemy, or disease, is not *external*, but internal; hence we must so arrange the electrodes as to bring it between the two. Secondly: The disease being positive, we must, therefore, so arrange the electrodes, as to not only make it appear between them, but it must appear between the positive and center of the two, being in the negative half of the current, or we fail to polarize it; hence, by placing the negative on the spine, and positive on or just above it, we are sure to make it thus appear, and consequently to change its polarity. It is sometimes admissable, in bad cases, to repeat the treatment once in two, four or six hours, for a few times.

CYNANCHE TRACHEALIS, OR CROUP.

The electrical condition and mode of treatment in this disease are so nearly allied to the last that

we deem it unnecessary to say much in reference to it. One thought, however, in addition, demands notice. In giving special treatment, the circuit should be closed, with the negative lower on the spine than in quinsy, as the disease is situated lower.

PNEUMONIA, OR INFLAMMATION OF THE LUNGS.

In this disease there is also a positive electrical condition of the part. *You must*, by a careful diagnosis, ascertain the exact *locality* and extent of structure involved, which you can very accurately do by following closely the rules laid down for diagnosis. In this disease, as much will be accomplished by *general* as by *special* treatment.

The general electrical condition of the patient in this case is reversed; the current is pointing inward from the surface and extremities to the internal organs, but especially lungs. Now, in the normal or healthy condition, the current moves in the opposite direction, *from* the center *to* the surface; hence, in your treatment you should seek to *imitate* nature and not to *thwart* her—your object being to lessen the amount of electricity *within* and increase it *without*—you must, therefore, use the inward end of the current within and the outward end without; therefore, commence with general treatment as follows: Seat the patient on the positive electrode

(that being the inward), and treat the entire surface of the body, as high as the diaphram, with the negative (that being the outward); wipe dry and cover; after which tie a large sponge on the ball of your throat instrument, as large as the patient can well introduce; attach this to the insulator, and that to the positive electrode, and direct the patient to pass it into the throat, holding it by the insulator. Now, do you not perceive, you have the inward end of the current planted internally, while *you*, with the negative, or outward end, treat the entire surface of the chest, occupying five to ten minutes; wipe dry; after which go over the whole surface of back and chest again, in the following manner: Let the patient introduce the instrument as before, the operator holding the negative in a wet sponge in his left hand, and, with the right, perfectly dry, he makes rapid passes (with the whole internal surface of the hand) upon the patient, treating thus two to five minutes with as strong current as the patient can endure in the mouth.

The above constitutes the plan of general treatment in this case, and should be repeated as often as each particular case may require; seldom oftener than once in twenty-four hours, and, in many cases, less frequently. For special treatment in the case, proceed as follows: After ascertaining, by an elec-

trical diagnosis, the exact locality and extent of diseased structure, proceed to polarize it, using the law of polarity as laid down in the second lecture, by placing the positive electrode as near the seat of the disease as possible, and the negative at such a point and distance from it as shall make the disease appear between the two, and yet between the positive and center of the two, thereby bringing the disease within the negative portion of the current; consequently must, of necessity, change its polarity. Perhaps some of you are ready to ask: As you have told us where to place the *positive*, please inform us where to use the *negative*. I answer: I have virtually done so in the above direction; but as you desire that I should be very explicit, and as I design so to be, and in order to fix these principles indelibly on your minds, I will illustrate them by a few examples. First: Suppose, on examination, we find the middle lobe of the right lung to be the seat of the disease. Now suppose, in our special treatment, we place the positive electrode directly over this, and the negative in the right hand of the patient; shall we change the polarity of the part? I answer: No; because in thus arranging the electrodes, we do not make the disease appear between them. Again: Suppose we place the negative under the patient's *feet*, we fail for the same reason; but if we place the positive directly over the disease,

and the negative opposite on the spine, then we shall succeed, inasmuch as in this case the disease will appear between the two; and also, being nearest the positive, you will therefore of necessity effect the desired change. Now, then, to guard you against running through vital, important organs, suppose again, for instance, while treating for quinsy, with the positive in the throat, you were to place the negative on the head, do you not perceive, by the law of electrical polarity, you would be charging the brain, disturbing its healthy balance, and though you might, perchance, cure the quinsy, you do it at the risk of destroying a more vital organ? A lady once said to me that her doctor thus treated her for a few moments, for a sore throat, and that she never experienced such a headache in her life. You, doubtless, see the reason why.

PLEURITIS, OR PLEURISY.

By this is meant, in technical language, an inflammation of the lining membrane of the thorax or chest. This is also the result of an electrically positive condition of the magnets or nerves, going to supply that membrane. The mode of treatment will be deduced by reference being had to the last named disease.

HEPATITIS, OR INFLAMMATION OF THE LIVER.

In this, as in other positive diseases, much is to be done by means of *general* treatment, using the outward current. In giving special treatment, in order to make the disease appear between the two electrodes and within the negative half of the current, you must place the negative on the opposite side, just above the hip, and, with the positive, treat over and just above the disease; treat also with the negative down the entire left limb, in order to disperse the current over a large amount of surface. You will no doubt readily perceive, that should you use the negative on the same side and limb with the disease, that you would fail entirely to touch the disease, as by so doing you would not bring it in range, and hence fail to reach it.

INFLAMMATORY RHEUMATISM.

This is a positive disease, usually located in the limbs and joints, but occasionally affecting the internal organs by metastasis, as the heart, lungs, etc. Rheumatism is a disease that has usually set at defiance the skill of the ordinary methods of practice of all ages. One professor, when asked by his pupils what was the best remedy for rheumatism, answered: "Six weeks;" by which he meant to be understood, "You can do nothing for

it." We answer the question by saying, from six minutes to six days.

This is a case also where you will need to use more or less general treatment, first throwing the current to the surface by the outward current, then use the downward treatment. The method of proceeding is this: First seat the patient on the positive, and with the negative electrode treat the entire body, secondary current; immediately after which place the feet in tepid water, into which place the negative, and with the positive treat the whole surface of the body again, occupying only about three to five minutes, light current. By thus proceeding you first direct the current outward to the surface; and, secondly, run off the surplus current to the water.

In the special treatment, suppose the knee joint to be the seat of the disease. By the law of polarity, you are to reverse the electrical condition of the part, by doing which you remove the cause, when the effects *must* necessarily cease. The negative is to be placed at the foot (in water if handy), and with the positive treat the whole surface involved. These cases are usually cured in from one to five treatments.

INTERMITTENT FEVER.

This is a fever marked by paroxysms; the most usual types are Quotidian, Tertian and Quartan.

Each type demands a separate description. Commencing with the cold stage, we again ask: What is disease? Ans. A loss of balance, &c. In what consists the loss in the cold stage? Ans. The surface and extremities, which in health are electrically positive, in consequence of a reversion of the current, have become negative. The brain and internal organs having received the current from them, have consequently become positive, which fact is evinced by the extreme and unyielding coldness of the former, and heat and thirst which usually attend the latter.

The philosophy of cure in this, as in all other cases, is to re-establish the equilibrium of electricity in the system. The first thing to be done is to administer general treatment, by seating the patient on the positive electrode, and with the negative treat thoroughly the whole spine, first with a strong current, working briskly from three to five minutes; wipe dry, and treat the front part of the body in the same way, only with a lighter current. After which, if there is pain in the head, give a light treatment over the spine only, with the positive, the negative being at the feet in water. The above is the method of treatment either in or just previous to the cold stage. I have never failed to bring the patient out of the chill by one treatment. Treatment in the stage of fever or hot stage: If there

should be any chill accompanying it, use the same treatment; but if not, you may omit the outward treatment, merely giving the downward; negative at the feet, in water, giving thorough treatment over the entire body with the positive. By this method you run the electricity off, and hence lessen the fever. The sweating stage demands generally *no* treatment, as this is only an indication that the Vis Medicatrix Naturæ has had a combat with disease, and having conquered, is now enjoying her repose.

LECTURE FIFTH.

NEGATIVE DISEASE.

Ladies and Gentlemen:

By the term negative disease, as we told you in the last lecture, is meant that kind possessing a *less* amount of electricity than the part or organ possesses in health. As in the previous lecture, it is not possible for us to speak of each particular nerve or part of the system separately, thus affected; to do which would add very little or nothing to the practical utility of the work. We shall therefore seek *only* to present before the mind a sufficient variety under this head, to give the student a clear and correct knowledge of their nature and treatment, and by those delineated have a basis by which to form a correct judgment, and arrive at safe conclusions in regard to those not herein named. In order that your mind may not be confused in rela-

tion to the quality or kind of electricity to be used in the various diseases, I would remark, that in this and the last lecture none are intended to be mentioned except those that are cured by the primary or secondary helix current (or Electro-Magnetism). And not only those mentioned in these two lectures, but all of the same class or kind that are *not* mentioned. Under this head, the first disease we shall speak of is

AMAUROSIS.

This is a disease of the optic nerve, and may be either partial or complete, producing either partial or complete blindness, and is considered by the schools of medicine as being an incurable disease. In order to present this in the clearest possible manner before the mind, let us suppose a case of complete or total blindness from amaurosis. And here I would remark, it is astonishing what large numbers of such cases we find in our travels. Among the vast number of cases of this kind which have come under our observation, we will mention but a single one. In the Winter of 1858 and 59, a gentleman totally blind, in consequence of amaurosis, was led to our office by a boy acting as guide. By the closest possible examination, no unnatural appearance could be detected about the eyes, save that the pupils were dilated beyond their natural

size. In this condition he had been for the last six months previous, notwithstanding he had consulted the (supposed) best authority in the United States, all of whom pronounced the case incurable and entirely hopeless. Relating to the success in the treatment, we will only say, that at the tenth operation the eyesight began to re-appear, and after receiving sixteen treatments the patient resumed the practice of his profession, the sight of one eye being restored. For reasons entertained by the gentleman, we made no attempt to restore the other eye.

Now what are the facts in the case? Inasmuch as the structure of the organ was in no way injured or interfered with, its material parts were all perfect and entire; hence, why could not the patient see? We answer in the first negatively. *Not* because he had no optic nerve or retina; not because there were no humors in the eye or lens wanting; not because any of its coats were destroyed; neither because its membranes were diseased. Nay, it was for none of the above reasons, as these were all perfect in all their parts; neither was it because the involuntary or voluntary powers of the mind were impaired, for these were perfect. What, therefore, we ask, was the reason? The answer to this question is given in a principle laid down in the first lecture, to wit: The mind, by both its voluntary and involuntary powers, governs the body,

and enables it to perform all its functions, and operations in the animal economy also; the mind being so infinitely superior to the ponderable, gross body, therefore it cannot come in direct contact with the latter, but uses an element through which to govern the body, that element holding a medium relation between the two, which is none other than the nervo-vital fluid, or electricity. Now let us apply the principle to the case in hand, and see if we have not a rational, philosophical explanation of the loss of vision. But before making the application, we will again define disease, which is a loss of balance of the two, or positive and negative forces of electricity, in the organ or parts concerned. Now, in the normal or healthy state, the current in the optic nerve is passing from the origin to the termination, or retina; hence the electrical relation of the *first* half is negative, being the inward, and the *last* half positive, representing the outward portion. But in case of total blindness from amaurosis, the current is reversed in its direction; hence the supply is cut off, the consequence is, paralysis of the nerve, and, as a natural result, a suspension of the function of vision. Now, then, the nerve being robbed of the electricity, and *it* (electricity) being the medium through which mind controls matter, or the connecting link between mind and matter, the *medium* being gone,

therefore the mind has no means by which to come in contact and govern the organ; hence the function of the latter must of necessity be suspended. That we entertain correct views of the nature of the case, will be seen by considering the philosophy of cure, which was to re-establish the connecting link, or nervo-vital fluid, if you please, in the nerve; the doing of which enables the involuntary powers of the mind to operate through it, and thus restore the lost or suspended function of the eye again.

Method of proceeding: First, give a few general treatments with the outward current, after which wet the back portion of the head. Attach the eye instrument to the negative electrode, fill with pure tepid water, into which the patient places the eye, keeping it open as much as possible; withdraw the plunger; now the operator holding the positive in one hand, with one or two fingers (the points) make firm pressure on the back of the head, a little to the opposite side of the centre from the eye under treatment, very gradually entering the plunger, as the patient can bear.

In the treatment of this disease the whole opposite half of the cerebellum to the eye diseased, together with the cervical vertebræ, will form the points of contact with the positive electrode, and the eye alone for the negative. Three to ten minutes at each time will be long enough to treat.

I would here remark that this disease appears in all variety of stages, from that of a few days to many years, from mere dimness of vision to confirmed blindness, and hence requiring a longer or shorter period of time for cure, from two to forty or fifty treatments; at the same time, it is but just to say, that there are but a small proportion of the cases who are not entirely blind, but can be cured; and even those who are, our experience leads us to assert, that a fair proportion of such, by a thorough course may be, notwithstanding the experience of Dr. Paige to the contrary.

DEAFNESS.

Deafness may result either from a disorganization of the structure of the ear, or from a paralysis of the auditory nerve. The former we cannot cure, as we do not claim to possess the power to re-create an organ or part that is destroyed; but the latter *can* be cured.

The same explanation we gave to the optic nerve, in amaurosis, applies to the auditory, in this species of deafness. The indication in treatment is also the same, viz: To restore the balance of electricity that is lost, or polarize the nerve.

Treatment: Tie a small bit of surgeon's sponge tightly on the point of the ear probe; attach this to the insulator, and that to the negative electrode.

Wet the back of the head, as in amaurosis; withdraw the plunger, using primary current. Now take an easy seat by the patient, resting the arm on something permanent, in order to hold a steady hand, grasping the ear instrument by the insulator as you would a pen for writing. Introduce it cautiously through the *meatus auditorus externus* (or external ear) to the *membrana tympani* (or head of the drum), or as near as the patient will allow. Now direct an assistant, who should be present, to handle the positive electrode, with a small wet sponge, to apply the positive on the back of the head, between the center and the other ear, with a very light pressure, gradually increasing until the pressure is firm and steady. His position should be such that he can keep one hand on the plunger, as that should be handled exceedingly careful. After thus closing the circuit, let the current run five to ten or fifteen minutes. Another polarity is as follows: Seat the patient on the positive, making the same touch with the negative as before, and also the negative where the fifth pair makes its exit, in front of the ear. Again, the positive may be introduced in the throat by means of the throat instrument.

APHONIA, OR LOSS OF THE VOICE.

This is a paralysis of the nerves of the vocal organs, or larynx. The inferior laryngeal branch

of the pneumogastric is the nerve affected. The current of electricity is pointing inward and upward, in place of outward and downward; and hence the nerve is left minus. To polarize it, place the positive on the cerebellum, as near as possible to the origin of the pneumogastric, while you apply the negative at the larynx. Treat thus for five or twenty minutes at a time.

Treat also with the point of your finger, holding the positive over the par vagus, from its origin to the junction of the recurrent nerve, on both sides, while the negative is planted at the lower portion of the larynx. Give more or less general treatment, according to the general condition of the patient, using the outward current.

CASE—MISS E. B., AGED 17.

In the Spring of 1859, came to me entirely speechless, in consequence of aphonia. For three years and a half previous she had not been able to utter a single word, either audibly or in a whisper, notwithstanding she had been treated a large portion of the time by various physicians. After we gave her the third treatment she spoke audibly, and after the fifth, could converse quite freely in a low tone; on taking eight, could talk and sing as loud and long as any body, remaining perfect at this date, being over ten years since cured.

Ladies and gentlemen, let us, if possible, ascertain why these physicians failed to cure the case. Do you say this is a subject too abstruse for your investigation, and should be confined to the province of the medical man? I grant that the medical man *should* investigate and understand these grand fundamental laws of life, health, disease and death; and we consider that the man who has not the honor and courage to investigate any subject pertaining to the life and well-being of the patient, possessing almost the smallest claims to merit even, as not worthy the patronage of the people, and a disgrace to the fraternity. Yet, whether the medical man does or does not investigate these things, we think it forms no reasonable ground of excuse for a neglect on the part of the masses. Do you expect because your minister preaches, exhorts and prays vehemently, that you are to be saved by virtue of this, without personal application and effort on your own part? You know better. You perfectly understand this matter. Scarcely in anything does the world manifest so much indifference and little interest as in the well-being of their lives and health. Would to heaven that mankind would wake up on this subject. We hold it to be the duty of every intelligent being, of age sufficient, to take charge of their own health.

The physicians could not cure this case for the same reason that those physicians could not cure the above case of amaurosis. They did not know what and where the disease was. This eternal hacking, hagling, bleeding, blistering, physicing and puking the body, for sins of which it is not now nor never was guilty, is a practice too cruel and wicked for any intelligent man or woman to be engaged in, and too low and debasing to be tolerated by any intelligent, refined person or community. Suffice it to say, that in the treatment of this case we pursued the course marked out in our directions. We simply did this: balanced the two forces of electricity in the nerves affected.

DYSPEPSIA.

This is supposed by medical writers to be a disease of the stomach, having its origin there. We take it upon us to say that it is no such thing. The stomach is only affected, secondarily, the same as any other organ. The same explanation of disease holds good in this as in all other cases, viz: a loss of balance, &c. Now, the polarity of the nerves going from the cerebellum to the stomach being lost, and hence the supply of electricity from the brain being diminished, therefore the stomach is left comparatively minus or negative, and it follows, as a matter of course, that the organ cannot perform

its legitimate function properly, and indigestion or dyspepsia is the result. Ah! says one, do you mean to say that electricity has any direct agency in the digestion of the food? We will answer this question as the "Yankees" sometimes do, by asking another one. Do you suppose the steam, that bland vapor, has any direct agency in moving that vessel on the ocean, or ponderous locomotive and train of cars? Again: Do you think that thunderbolt, millions of times finer and lighter than steam, which is no more nor less than electricity, has any direct agency in rending that stately monarch of the forest, and shivering it to atoms when brought in contact with it?

Arrest the passage of electricity from the brain to the stomach, by means of a ligature around the principal nerves, and you arrest the digestive process instanter; after which, introduce a battery current below the ligature into the organ, and the function is again resumed, by which we see that electricity is the principal agent used by the involuntary powers of the mind to carry on this function. We say electricity, because if the nervous fluid is cut off, it will produce the same results when introduced in its stead. Now, in dyspepsia or indigestion, there is generally a deficiency of electricity sent to the organ, and in a case of long standing the cerebellum is also in a negative condition;

hence you will perceive that the seat of the dyspepsia is in the brain, and the stomach is suffering secondarily. This state of things may arise from two causes, viz: mental and physical. Mental, when the mind is over-exercised or over-taxed; physical, by the introduction of undigestible substances into the stomach, or gormandizing, excesses in eating and drinking. These causes should be strictly avoided by the dyspeptic. Let this be your first injunction to the patient, after which proceed to the cure as follows:

General treatment with the outward current: Seat your patient on the positive electrode, giving the body treatment with negative, cerebellum and all, closing by placing the feet on the negative and treating the limbs with the positive. Pursue this course once each day for a week, after which give special treatment as follows: Make the cerebellum and spine, as low down as the stomach, together with the tongue and the organ alimentiveness, the points for the positive, treating the stomach and liver with the negative. When treating from the tongue, use the spoon attached to the insulator, instead of the throat probang. Treat from some of these points at one time, and others at another time. As a general thing, it will be advisable to give the special treatment one day and the general the next. If the case is of long standing, and re-

quires a good deal of treatment, after treating two or three weeks, it is well to suspend treatment for a few days or weeks, and then resume it again. We have known the worst of cases of many years standing, after resisting all other methods of treatment, to yield to this in from one to six weeks, completely.

DIABETES.

This is a disease characterized by great augmentation and often apparent alteration in the secretion of urine; generally accompanied with excessive thirst and emaciation. This is one of the diseases refusing to yield to the common methods of practice. Allow me again to call your attention to the fact, that disease is a loss of balance of the two forces of electricity, &c. The organs in this case, having lost their balance, are especially the kidneys, bladder and skin. The former being in a positive, and the two latter in a negative condition. Commence by giving general treatment with the outward current, in order to bring the surface under the head, or positive influence, which done thoroughly, and your cure is one-half accomplished.

For special treatment: Throw the current in at the kidneys and bring it out at the bladder. By this means you change the electrical condition of those organs, when the cure is accomplished. This disease usually yields to from three to ten treat-

ments. Alternate the general with the special treatment. A good practice in this case is to give a general treatment in the evening, and special in the morning.

DROPSY.

This may be either general or local. When general it is termed *Anasarca*, when local it takes its name from the part affected, as Hydrocephalus, when in the head; Hydrothorax, when in the chest; Ascites, when in the abdomen, etc.

It consists in a preternatural collection of serous fluid in any cavity of the body, or in the areolar texture, and in its passive or most common form is the result of an electrically negative condition of the absorbants, and secretory organs and glands, and of the skin. In general dropsy, the whole system is more or less at fault, and hence your treatment must be mainly general, making the coccyx and throat the points for the positive electrode, and the entire surface for the negative, with an occasional downward treatment to the feet. You are doubtless aware that by the above method you make the current of electricity observe the normal or healthy direction, viz: outward and downward. In special dropsy, you must, by a careful electric diagnosis, ascertain the exact negative points, and besides giving general treatment, make special application

to those parts; running your current from the origin of the nerves going to supply the organ, or part, as near as may be, *to* the organ, or part, by which method you change the electrical polarity of the particular organ or part concerned; and thereby having removed the cause of the dropsy, it must cease.

CHRONIC RHEUMATISM.

The chief characteristic symptoms of this differ from those of the acute. The acute being attended with unusual heat, redness, and lancinating cutting, tearing and rending pains; whereas, these symptoms denoting a positive condition in acute, are wanting in the chronic form; hence, as a general thing, the parts affected are in a negative electrical condition. There are often very harrassing pains accompanying chronic rheumatism, but the pains are of an entirely different character from those attendant on acute; which difference will be defined when we come to speak of neuralgia. There is also many times more or less swelling attending this form, but this is not in consequence of a present, positive condition, as we witness in the acute form, but is in general the result of an effusion of coagulable lymph, which tend to produce permanent thickening of the parts. As in the acute so in the chronic, the disease is apt to shift from point to point. This being the case, we must therefore have

more reference to general treatment than we would were it confined to one particular locality during its entire course. Very much is to be done in the cure of this disease, by means of general treatment, as the entire system is more or less out of balance. A gentleman once came into my office suffering exceedingly with sciatica, of years standing. He being in a great hurry (his professional duties pressing), I consequently only gave special treatment to the limb; a day or two after, he came in (in a hurry again), and said his limb felt a little easier, and wished another 'touch,' as he had but a spare moment; after receiving which, he left. On coming for the third, I told him, hurry or no hurry, he must submit to my method of treatment, or I should treat him no more; he readily consenting, I gave him a general treatment, to accomplish which required some thirty minutes; which completely arrested the disease. I heard from the case months after, and was informed by him, that he had no farther trouble, although he had many times unavoidably (being a physician) exposed himself severely.

Treatment: In giving the general treatment, use the outward and downward current. This should be repeated according to circumstances; in some cases more, and in others less frequently, exercising your own judgment. When the disease is located at a particular joint, it is a good practice

to pass the current through and through, in various directions, and thus break up the inactive and torpid condition of the part; after which your are to restore the electrical tone of the joint or part, by going to the great "*Broad Way*" of the nervous system, viz: (spinal column) with the positive, while using the negative on the part affected.

EPILEPSY.

In order that you may clearly understand the nature of this disease, we shall divide it into two stages, viz: that of paroxysm or fit; and secondly, remission or interval.

The electrical condition of these two stages is entirely different, the one from the other. In the paroxysm, the brain is highly positive; while in the interval, it is negative; therefore the treatment is to be regulated accordingly.

Treatment: In the paroxysm the treatment is to be the same as for apoplexy, with this difference: treating the spine less and the head more. After closing the circuit as in apoplexy, treat the entire spine, not more than two to four minutes with secondary current; then wetting the head thoroughly, switch on the primary and treat that with a light current until consciousness begins to return. The time to cure the disease is in the interval. You must now carfully diagnose the case, to ascertain

whether any of the internal organs are at fault, which is often the case. If so, they must be met by appropriate treatment, regulated according to their electrical state or condition. The brain and spinal column being in a highly negative condition, must consequently be treated with the negative electrode, placing the positive at the feet and hands. By this method I grant that you will at the time rob the extremeties, but it will only be temporary, for as soon as you establish a healthy electrical condition in the brain and spinal marrow, they, being the great centres, will distribute the current again to the extremities.

Epilepsy of long standing often requires weeks or months in which to effect a cure; and yet I have known them cured, even of years' duration, in a few days. A gentleman, between fifty and sixty years of age, once came to me, who had been afflicted with it for over ten years, and said he had paid sixteen hundred dollars to get cured, but had failed of the cure. After taking treatment about three weeks he was discharged, cured. Nearly two years after, he wrote me saying he had not had a fit or any appearance of one since he left me; and begged of me to publish to the world that the great desideratum for epilepsy had at last been discovered. You are not to expect to cure all cases, for all cannot be cured; but this fact should not intimi-

date or discourage you, inasmuch as no other medical practice extant can cure five in a hundred cases; while our experience leads us to the belief, that by our method, from fifty to seventy-five per cent. of the cases may be cured by a thorough and proper course of treatment.

CHOREA, OR ST. VITUS DANCE.

The characteristic symptoms of this disease are, irregular and involuntary motions of one or more limbs, face or trunk; and generally occurs before the age of puberty.

It is in consequence of a loss of electrical balance in the voluntary motor nerves, and as these nerves are under the control of the voluntary powers of the mind, hence the healthy electrical balance of the two brains (large and small) is disturbed. The cerebrum (or large brain), not receiving enough electricity from the cerebellum, it cannot therefore impart it to the voluntary nerves, and to the voluntary muscles, to enable them to move in a natural, steady manner, hence the motion is unsteady and spasmodic.

Treatment: Balance the electrical forces in the two brains, and the disease is cured, and the involuntary motions of necessity must cease. In this case, you should have recourse wholly in the special treatment to the primary current, as the second-

ary would be too vibrating to be endured over the cerebrum. The special treatment consists in treating the cerebellum (small brain) with the positive, and the cerebrum (large brain) with the negative, with a strength of current barely susceptible to the patient, from three to ten minutes at a time; repeated from two to four or five times a week. More or less general treatment is required with the tonic current, in the case, which should precede and be alternated with the special.

CHOLERA.

This is a most formidable disease, and perhaps you are already wondering how it can be reached by means of electricity, which we will soon endeavor to show you. But before proceeding to the treatment, we must understand its nature and condition.

We remark again, that disease is a loss of balance of the two forces of electricity in the part. You will please bear in mind, that in the normal condition the current in the human being is moving downward and outward, thereby making the inward negative, and the outward or surface positive. Now, in cholera, the current is reversed in the whole man and passing inward, which fact is evinced by the peculiar sufferings of the patient. Let it be borne in mind, that *positive* electricity is heat, and *negative*

is cold; or more properly speaking, *electricity* is heat, while the absence of it is cold; also, that *heat* expands, while *cold* contracts. I say, understanding these facts, we at once perceive the philosophy of the symptoms manifested in a severe paroxysm of cholera, which are usually the following: In the first stage, a peculiar white appearance of the tongue, a sense of languor and debility; some impairment of the appetite; an uneasy sensation of looseness in the bowels; sometimes slight diarrhœa, but without pain; coldness of the feet and surface generally; the pulse, if examined, is usually found soft and feeble, sometimes increased in frequency. The symptoms in the second stage consist of violent vomiting and purging of the rice water fluid, followed with severe cramps of the muscles of the extremities, and other parts; attended with excruciating suffering, with coldness of the surface and extremities; a feeble pulse; often extreme thirst, and a peculiar burning sensation at the pit of the stomach.

Symptoms of the third stage, or stage of collapse: Shrunken features; cold, clammy surface; corrugated hands; a leaden hue of the surface; profuse, clammy prespiration; cold, clammy tongue; slow and oppressed breathing, and nearly pulseless wrist; all together present a combination of symptoms, not soon to be forgotten. In the fourth or

last stage the symptoms are: The pulse becomes rapid and quick; mouth and tongue dry and furred; stupor, delirium, and other evidences of disease of the brain supervene. Now let us examine these symptoms minutely, and we shall see the exact relation they have to the electrical condition of the system at the time, or the relation of cause and effect. The languor and feeling of debility, looseness of bowels, coldness of extremities and surface, consequent upon the first stage of the disease, clearly to our mind point to the fact that the vitalizing element, electricity, is leaving these parts and going to the brain and internal organs; while the more formidable symptoms of the second stage tend to confirm this opinion, and as the reversion becomes more complete, the symptoms necessarily must be more aggravated.

We see also in this stage a beautiful illustration of the mechanical action of electricity, thus verifying the law we have laid down, to wit: the *inward* end of the current contracts while the *outward* end expands. How else can we account for the severe cramping of the muscles in this stage? Who ever heard of a muscle violently cramping or contracting, while possessing a greater amount of vitality than it is wont to in health? Nay, this phenomenon is the result of too little, not too much. We pass on step by step, and come to a still more fatal

set of symptoms, viz: shrunken features; cold, clammy surface; corrugated (or wrinkled) hands; a leaden hue of the countenance and surface; profuse, clammy perspiration; cold, clammy tougue; slow and oppressed breathing; pulse nearly gone, &c., &c. And finally to remove the last vestige of doubt, as it were, in relation to the electrical condition of the system, through the various stages of this fearful malady, and also to show us that mind is infinitely superior to, and of vastly more consequence than the gross, ponderable body, we perceive that it is the last to be attacked, and hence is reserved until the last grand scene in the drama, when we have unmistakable evidences that its citadel (the brain) is invaded, which are mental aberration, muttering delirium, vitality rapidly ebbing, &c., and finally, death closes the scene. Now, then, to briefly review the case.

We cannot, I think, fail to perceive that in exact proportion as the current becomes inward and upward in its course do the symptoms become aggravated from the very onset of the disease to its final termination. The same principle has been illustrated before.

We will very briefly state what we conceive to be the most effective cause to produce this state of things. It is generally conceded, by those whose means of research and clinical experience have

been extensive in cholera regions, that the peculiar state of the atmosphere in those regions where the disease has prevailed most extensively has had more to do in propagating it than any or all other causes combined, which opinion we coincide with. It is said that while the cholera was raging in Paris a few years since, a powerful electric, or atmospheric machine, could not be made to produce sparks for several days during the height of the disease—a singular phenomenon, which was no doubt owing to the fact that a certain proportion of the oxygen was wanting in the atmosphere, while it was surcharged with either sulphurated or carbonated hydrogen gas, or perhaps carbonic acid gas. At all events, it is clearly apparent that some poisonous *negative* gas or gases, not capable of supporting animal life, had in a certain degree supplanted the life-supporting *positive* oxygen. Now, the atmosphere being received into the lungs in this impoverished condition, consequently they could not fully meet the demand of the blood, which fact explains the cause of the dark grumous appearance of the blood, so generally found in post mortem examination.

Dr. Jamieson, in his report to the medical board of the Bengal Presidency, says: "The pecular appearance of the blood excited my attention. In every dissection which I performed, I uniformly

found the venæ-cavæ, the mesentric veins, the veins in the vicinity of the heart, the vena portæe, the iliac and subclavian veins, and the sinuses of the brain, loaded by a thick, viscid, and black blood. The right cavities of the heart were generally distended with the same description of blood, and when any was found in the left cavities of the organ it was similar in appearance to that lodged in the right. The lungs were always completely engorged with blood of a pitchy or black appearance, and all the internal viscera presented a greater or less degree of congestion of blood possessing nearly the same character. The blood vessels at the external surface of the body, and in the extremities, were generally contracted and empty, or nearly so. It may be inferred that the nervous fluid, in some manner or other, received the first impressions of the cause and afterward gave rise to this condition of the circulating fluid." Now, it is evident to our mind, that the explanation of this appearance of the blood lies in the fact above stated, viz: by reason of the lack of the positive oxygen, an excess of some other negative gas. The blood being thus impoverished, the involuntary nerves could not receive the vitalizing principle, electricity, and hence not receiving it cannot convey it to the brain, and the brain not possessing it, consequently the *Monarch*, or mind, cannot distribute it to the various

parts of his empire, the body; the results of which are, the entire man is in a negative electrical condition, comparatively. And, therefore, as the supply is not enough to answer the demands of the *whole* system, hence the more vital parts *must* be supplied first, in preference to those less vital to the life and well-being of the man; and hence we see, in watching the progress of its destruction, this principle is strictly adhered to: the *least* essential parts are deprived first, and passing step by step, taking the next above in the scale of importance, and then the next, and so on until it arrives finally at the brain (the seat of the master), and, on accomplishing its terrible work of destruction, the *Master* takes his leave, and death is the result.

"Life's troubled dream is o'er."

Treatment: By the foregoing description, you doubtless already see the indications in the case, which are to restore a normal and healthy circulation of the electric fluid through the entire system; in other words, to balance the two forces of electricity through the entire man. Place the positive electrode in contact with the coccyx, or lower end of the spine, or still better, attach the rectum instrument to the insulator, and that to the positive, and introduce it within the rectum (say an inch), then with the negative electrode treat the entire

person from half an hour to an hour or longer, closing each time or every other time with light treatment on the head. Repeat this treatment twice or thrice a day, and still oftener if necessary. There is no danger, as you are using the *tonic* treatment. In the first stage, once or twice a day will be sufficient, but in the future stages two to four times a day may be needed. The primary current is best adapted to this case.

NEURALGIA.

This term is derived from two Greek words, which signify pain in a nerve. There are two kinds of nervous pains, and *only* two, viz: that consequent upon the nerve possessing *too much* electricity (positive), and that in consequence of having *too little* (negative). When a nerve is *entirely* robbed or paralyzed, it can endure *no* pain. Sever the nerves of sensation leading to a limb, then you may mangle or burn the limb to a crisp and there is no sensation of pain. Neuralgia, like all other conditions named, is the result of a loss of balance of the positive and negative forces of electricity in the magnet or nerve concerned. Prof. Dunglinson says: "All varieties of neuralgia are obstinate, and the greatest diversity of means has been made use of; bleeding, general and local, emetics, purgatives, rubefacients, vesicants, actual cautery, nar-

cotics, mercurial frictions, electricity, destruction of a portion of the nerve, &c. The most successful remedy, perhaps, is the carbonate of iron, given in large doses." Now listen to what he further says: "This plan of treatment" (I should say the *plan* referred to is the method laid down for administering the iron), "continued for a month or two, will often relieve and" (now see) "ultimately remove this much dreaded affection." Mark, he does not tell us whether he means in *this* world or the *next*. He says further: "The mode in which it acts is by no means clear; but it is almost as certain as any other remedy used in disease in producing its salutary effects."

Among the many things used in neuralgia, Prof. D. mentions electricity, which, like all others (he tells us), has failed. Why has it failed? We have answered this question in our first lecture, and hence will not stop here to do so. He *guesses* that large doses of iron is the best remedy, and tells us if taken a *month or two* will often (not uniformly) *relieve*. Now, ladies and gentlemen, who wants to eat carbonate of iron a month or two (and that in *large* doses, too), in order to obtain a little relief from neuralgic pains, when, by a scientific application of electricity, they will *always* obtain *complete* relief in from one to five minutes. Of the thousands of cases treated by us, I will only mention a single

one. While I was lecturing and operating in Buffalo, N. Y., Dr. H. came into my office to inquire if I could relieve a terrible case of neuralgia, and said his wife had been suffering terribly for a week; said he knew all about electricity (having used it in his practice over twenty years), had tried it repeatedly in her case without the least benefit whatever, and also all the remedies he knew of with like result. He brought patient in, she suffering intense agony at the time. In three minutes after commencing the treatment, she said she was perfectly free and easy. The next day the Dr. came in to make arrangements for instructions, declaring that the "Medical Profession" was ignorant of the medical uses of electricity. The first thing is to decide whether the pain is a positive or a negative pain, then act accordingly, observing the law of electrical polarity.

LECTURE SIXTH.

CHEMICAL ELECTRICITY.

Ladies and Gentlemen:

We come this evening to discuss the rationale of chemical electricity in the cure of disease. Chemical electricity or galvanism, as before remarked, is obtained by means of the cups and acid disconnected from the helix, and is the purest quality of electricity known. It is to be used in preference to all other kinds in the treatment of that class which we denominate unhealthy disease, and also in all foreign or extraneous growth. The first disease we shall notice under this head is

SCROFULA.

This disease more generally affects the glandular system, and often the internal organs also, as the lungs, stomach, mesentery, &c. It possesses a

certain malignancy, in consequence of which we have placed it in the class of unhe althy disease. You doubtless recollect I told you in a former lecture that electro-magnetism, or that produced by passing the current through the helix, was not applicable in the treatment of this class of disease, the reason being that in them there is a chemical action going on, and no corresponding chemical quality in this current; hence, galvanism or pure electricity is used in order to meet this peculiar property of the disease. You will bear in mind that the amount of electricity used in each case should be proportioned to the amount of resistance offered; and the amount of resistance depends upon the nature of the structure and virulence of the object to be acted upon.

In the decomposition of metallic solutions by means of galvanism, you will recollect that the metal or base of the solution always appears at the positive end of the current, or negative pole, while the electro-positive element is found at the negative end, or positive pole; hence, in the treatment of extraneous growths, tumors, &c., you are to act with reference to this law, your object being two fold, viz: First, to break down or change the structure of the part, and secondly, to disperse it by absorption. The former is to be obtained by the negative end, or positive pole, and the latter by the positive

end of the current, or negative pole. Now, in nearly if not all cases of scrofula, the whole system partakes more or less of the taint peculiar thereto; hence the treatment must be general. In these cases where the disease is general the tendency of the current in the patient is inward; hence you are to reverse this tendency by general treatment over the entire person with the outward end of the current, or negative electrode, by which means you not only give an opposite direction to the current, but also promote absorption. The rule for connecting your series, and also the polarity of the galvanic current, are given in the second lecture. This current produces no perceptible sensation to the patient. I should have remarked, in giving general treatment the coccyx or termination of the spine and throat are the points for the positive electrode.

GOITRE.

This is an enlargement of the thyroid gland. It is not an unhealthy disease, not being malignant or poisonous in its nature; but being an unnatural foreign growth, it therefore requires the galvanic current to disperse it; Some recent cases may be removed by means of the helix current, and by thoroughly arousing the absorbants.

Treatment: To act specifically on the tumor, I use the positive there and the negative electrode on

the whole length of the spine. By this course you deflagrate the tumor, after which you should give general treatment with the outward current, seating on the positive. This stimulates and gives tone to the whole system, and enables it to take up by absorption as fast as the other method decomposes; hence both methods should be practiced at the same sitting, and in the order here laid down. The above is the method to be pursued, whether using the galvanic or magnetic current.

CANCER.

This is to be classed among the unhealthy diseases. Generally the entire system is impregnated with a peculiar poison in cancer, and hence nothing will do but the purest quality of electricity. The objects and method of treatment are the same as in the above case, viz: deflagration and absorption, bearing in mind, however, in deflagrating the tumor, run through as few important organs as possible. A large number of cups may be required to cure very obstinate cases.

FEVER SORE.

After supperation takes place the disease is in a negative condition. These sores often continue to discharge for a long time, sometimes for months or years. The reason of this is in consequence of

the existence of a poisonous taint, which is to be met before the cure can be accomplished; hence a good deal of general treatment is required with the cups or the primary helix current, making polarity the same as in the last case.

For special treatment: Make the spinal column the point for the positive, and the sore the point for the negative electrode. If there is an orifice in the sore, pass a silver probe into it attached to the negative, while treating the spine with the positive. Repeat the treatment from twice to five or six times a week, as the case may require.

OPACITY OF THE CORNEA.

This is an extraneous growth, and is generally in consequence of a former inflammatory or positive condition of the eye. It may or may not be connected with an unhealthy condition of the system. If it is, more or less general treatment with the cups will be required; but if not, no general treatment is needed, only special, as follows: The substance being external, attach the eye glass to the insulator, and that to the positive; fill the glass with pure tepid water, and place the eye in the glass; place the negative (enclosed in a wet sponge) in the patient's hand corresponding with the eye; treat thus for five to ten or fifteen minutes at a time, directing the patient to keep the eye open as much

as possible; also place the negative in the patient's mouth and at the end of spine, alternating from time to time. I will correct what I said above concerning general treatment. It must be given in order to promote absorption, and may be given with the helix current, repeated two or three times a week.

CATARACT.

This consists in opacity of the crystalline lens, or capsule, which prevents the passage of the rays of light and precludes vision. This, you will perceive, is also an extraneous growth, its situation, however, being internal, while the other was external; and for this reason it requires much longer time to effect a cure. This, like the last, is not necessarily connected with an unhealthy condition of the system, and is incurable by any means known to the profession, except by an operation. It is but reasonable to say that there are but few cases comparatively cured even by *this* practice; simply because they will not continue a sufficient length of time to receive a *perfect* cure, as it requires months in cases of hardened cataract. The reason of this is from the peculiar locality of the cataract. Its position being posterior to the cornea and sclerotic coats of the eye, and these membranes being exceedingly bad conductors of electricity, hence it is much more difficult to reach it than if on the cornea, as

in the last case. Notwithstanding all these difficulties, I am satisfied that with a proper course of treatment they may be entirely cured, even in their ripe condition.

Treatment: For the removal of cataract, you need a battery of considerable power, according to the density of the body. Cataract being located internally, you must therefore so arrange the electrodes as to make it appear between the two, and, as the positive is the one that deflagrates, hence *it* must be placed nearest the cataract; therefore you are to arrange them as follows: Attach the eye glass to the positive, filled with water, into which place the eye. After thoroughly wetting the back of the head, place the negative on the opposite side of the center from the eye you are treating. If you are using a strong current it should not be continued more than five to ten minutes at each time, as a longer time would be likely to injure the healthy structures. General treatment will be needed occasionally to promote absorption, using the outward helix current if no taint exists in the system, repeating from once to three times per week.

CATARRH.

This results from a positive condition of the mucus membrane of the air passages. It scarcely elicits much attention in its positive condition,

being looked upon as a common cold merely, and hence is allowed to pass almost unnoticed as it were, into the negative or chronic condition, in which state we usually find it. In its first stage, it may be readily removed, whereas in its latter, it is much more difficult, and often assumes a formidable and dangerous appearance from its liability to involve not only the entire air passages, but the lungs also. The character of this discharge requires a brief notice. Although it cannot be said to be actively poisonous in its nature like that of a cancer, yet it possesses a certain acrimony, which enables it to corrode, and irritate other parts with which it comes in contact, and this is owing to its extremely negative character. It is astonishing to see what multitudes are suffering with catarrh, and although it is seldom cured by the ordinary methods of practice, yet it is very easily cured by this method. The primary helix current will cure a large proportion of the cases; some, however, are so obstinate as to require the pure galvanic. Whichever current you use, seat the patient on the positive, and make the seat of the disease, to wit: the root of the nose, throat, trachea, bronchia, &c., the points of the negative electrode, giving more or less general treatment to enable the system to absorb and carry off the foreign matter.

MECHANICAL ELECTRICITY.

The mechanical action of electricity is as follows: In passing the current through a part of the body, the first or negative half contracts, and the last or positive half expands the body or part through which it passes. Now, it is in view of this principle in electricity that we are to use it in deformities, curvatures, prolapsed organs, contracted muscles and parts, etc. The first condition we shall speak of under this head, is

LATERAL CURVATURE OF THE SPINE.

When this is in consequence of the destruction of the important muscles concerned, it cannot be cured; otherwise it can. This is in consequence, also, of a loss of balance in the parts concerned.

Treatment: In the treatment of this case, you should first act upon the negative, contracted set, for a few treatments, as follows: Introduce the throat instrument, attached to the positive, and with the negative, or outward, treat these muscles thoroughly; say for two, to four or five times, after which, reverse the electrodes and treat the *expanded* muscles a few times, then treat both sets at a time, as follows: Take the insulated sponge in one hand and the other electrode (inclosed in a sponge) in

the other; placing them in apposition, the positive on the expanded, and the negative on the contracted side of the spine, with a firm pressure and strong current, treat the parts involved, keeping the electrodes opposite each other. Finally, place the positive firmly on the trapezius muscle (situated at the posterior part of of the neck and shoulder), on the side corresponding with the concave portion of the curve, and with the negative treat the convex portion. By following the above directions, ninety per cent. of all the curvatures may be made straight, and often with from two to a dozen treatments. My students are many times almost frightened at the success in these cases.

STRABISMUS, OR CROSS EYE.

This may be natural or acquired. If the former, you will not cure it, but if the latter you can readily. It may also occur in consequence of a spasmodic action of one of the rectus muscles, which is readily cured. Perhaps I cannot better illustrate this than by referring to a case of this description, which occurred in my practice several years since. A lady came into my office with the eye rolled outward under the temporal bone so far as to hide the entire iris from view, an occurrence of three months' standing, yet otherwise enjoying good health. This was in consequence of a loss of elec-

trical balance in the nerves supplying the rectus internus muscles of the eye. The inner had become positive, expanded, and the outer contracted, negative. The inner represented the head, and the outer the tail of the current. Now, the only thing to be done was to change the polarity of the nerves and muscles, which was done in five seconds, in the following manner:

Taking two ear probes, and attaching them respectively to two insulators, I directed the point of the positive within the inner canthus until it reached the attachment of the inner rectus muscle, also the negative one, within the outer canthus in same way, after which a very gentle primary current from the helix was made to traverse the instrument, when the organ immediately assumed its natural position.

SPURIOUS CONSUMPTION.

From close and careful observation of twenty-five years as a medical man and electrician, I am satisfied that not more than one-tenth of those supposed to have consumption (according to the popular acceptation of the term) have any such thing; having lived and died, themselves and their friends being deceived in relation to their *real* condition; and thus tens of thousands are annually being swept from time into eternity. Perhaps this idea

may astonish you (for who has not lost a friend by means of this destroyer?) And yet I verily believe it is as true as strange.

Doubtless you are already wondering: What, then, is it that is making such terrible havoc among the race? The answer to this question is, they are dying because they do not and cannot breathe; or in other words, the lungs do not have room for free play. Now let us examine this subject carefully, and ascertain, if possible, the facts in the case. Far too much stress has been placed, and pains taken by the American people, to cultivate a delicate and graceful form in the person of their offspring, especially the female portion. As though the Almighty had made a grand failure in the formation of your child, therefore *you* propose to take the matter into your own hands, and put on the grand finishing touch, which He fails to do. It is generally conceded, I think, that *little* children, until they are at the age of five, six or seven years, look as well, or better, to be plump, florid, or active and buoyant, jumping and romping, in doors and out, full of health, vigor and happiness. We say all this is generally tolerated, and even cultivated during the first few years of their existence, in both sexes alike. But lo! and behold! mothers begin to think that their little girls need to be trimmed up a little, or put in a little better form, and hence

certain appliances are brought to bear upon them with reference to this end. Their garments must be tightened a little, and they kept in doors; their coarse, boyish ways and amusements must be laid aside, and they must now be manufactured into *little ladies;* and hence the process commences, not meaning (of course) to really injure the permanent health of the little one. No, no, far from it, for no mother would knowingly do that; and thus the work of trimming and crimping goes on, until the plump, florid, rugged and healthy little girl of six or eight years (if she happens to have vitality enough to endure the process) comes to be the trim, genteel, delicate, pale and beautiful young lady of fifteen, sixteen or eighteen. The mother, yes, and many times the father too, is delighted at having so well accomplished their object; are flattering themselves with the false idea that their daughter is now all fitted up for the fashionable circles, a long life of pleasure and happiness; when, perchance, a slight hacking cough from the fair one grates on the ear of that fond parent. Little or no attention is paid to it; but as the days or weeks pass on, the cough increases, with slight pains in the side, chest or head, with more or less restlessness in sleep. The fears of the parents begin to be aroused, when they resort to some simple means, believing it to be nothing serious; but finding these

to fail, the physician is summoned; he prescribes some simple remedies, thinking, perhaps, the symptoms will soon yield; but no, they continue with a steady onward march. The whole materia-medica is ransacked in quest of something whereby to arrest the march of the fearful monster (supposed consumption), but all to no purpose; the edict has gone forth, and cannot be revoked. "The wages of sin is death;" an immutable law has been violated, and the death penalty is approaching, all efforts and anxieties to the contrary notwithstanding; and in a few short weeks or months, all is over; death closes the scene. You, your neighbors, doctor and all, suppose the person died with consumption; and as you look with bleeding heart and tearful eyes on the beautiful form of the loved one, you feel to repine, and wonder at the providence of God, perchance exclaiming: "Why should He be so cruel! to take her (or him) in the morning of life, when we had taken so *much* pains to train and fit her for the enjoyments of life and happiness. Oh! how mysterious are the providences of God!" And to put on the climax of absurdity, the parson, in performing the last solemn funeral rights of the deceased, perchance, chooses the text:—"The Lord gave, and the Lord hath taken away, blessed be the name of the Lord." We should have said, prior to the burial services

permission was obtained, and an examination had; which reveals the fact that the lungs are not consumed, or gone, but in an exeeedingly contracted form. On removing and inflating, however, they are soon made capable of expanding to their normal size. Now, then, the patient having all the appearance of consumption, and yet the post mortem, showing the lungs comparatively healthy, what, therefore, was the cause of death? That this is a question which should deeply concern the whole world, at least the American people, I think none will deny; and to the best of our ability, we will answer it.

The lungs were made and adapted to the atmosphere, with a capacity for inhaling a certain amount of atmospheric air. The blood and other parts of the physical system require a given amount of electricity to develop and make them healthy. The electricity is contained in the oxygen of the air, and has no means of communication with the internal man but by the lungs; hence, if by any means they are rendered incapable of receiving it, the consequence is, they cannot transmit it to the system, therefore the system must be without it; and hence, the electricity being the grand vitalizing element of the system, it follows, therefore, that the vitality and development of the system must sink in the same proportion that this is withheld, and, sooner

or later, death from exhaustion must ensue. Now to illustrate this let us refer to the case in hand, and I think we shall perceive that whoever else was guilty in the premises, God was not.

We see the little girl, up to the age of six or eight years, full of life, vigor, health and happiness; she is breathing rightly, receiving and appropriating her full quota of oxygen and electricity; but, as the trimming and cramping process is pursued, the health, bloom and vigor begin to leave, until finally that rosy cheek has disappeared, a pale, marbled appearance takes its place, and the whole train of symptoms above described. In short, you have effectually (though by no means intentionally), I will not say killed, but deprived the child of life, literally starved her to death, by indirectly withholding the vitalizing element, electricity, which has been done by contracting the cavity of the chest to such a degree that the lungs were unable to receive more than from one-quarter to one-half the oxygen demanded by the system; the consequence is death from starvation, which we suggest would be a far more appropriate text to be used at the funeral obsequies than the one quoted.

But to return to the case: When friends are alarmed and all anxiety, remedies are powerless, and in spite of all, death making rapid inroads, and the case hastening on to a fatal termination, thank

heaven, we come even at this critical moment to offer you a remedy, not in the form of cod liver oil, hypophosphate of lime, syrup, or anything of the kind, as we believe none of these are indicated, but one based upon an immutable law, upon rational, common sense principles, and one that will reach the case, too, unless the encroachment has been carried to such an extent as to put the parts beyond the reach of an active response; and that remedy is none other than *Electricity*.

Now, the *real* condition of the case is MECHANICAL CONTRACTION of the chest and diaphragm, resulting in consequence of the peculiar process of crimping, trimming and training to which the case has been subjected, all of which has had the tendency to reverse the electrical condition of the system. The respiratory nerves and muscles not being fed, have contracted upon the ribs, and they upon the lungs, until they have become so cramped as not to be able to move, and finally death is the consequence.

Treatment: The important thing to be done is to overcome this contraction and expand the chest, which is to be accomplished by using electricity with reference to its mechanical action. The point for the positive electrode is the spine, between the middle cervical and middle dorsal vertebræ, and for the negative the entire front and sides of the chest and diaphragm. The general, tonic treatment, is to

be used in connection with the chest, to give tone and vigor to the system.

PHTHISIS PULMONALIS, OR REAL CONSUMPTION OF THE LUNGS.

That this disease may, and does sometimes exist, we do not deny; but that it is a common disease, we do not believe, as we have before said. This consists in the formation of tubercles in the lungs, which sooner or later soften and ulcerate, accompanied by a certain poisonous taint, which must be met by the chemical electricity or galvanism. The method of treatment is the same as in the other kind.

ASTHMA.

Difficulty of breathing, recurring at intervals, accompanied with a wheezing sound and sense of constriction in the chest, cough and expectoration. These symptoms are the result of a partial paralysis or negative electrical condition of the respiratory nerves, and in a large proportion of the cases we find the chest in the same contracted condition as in spurious consumption. The same method of treatment is required as in that, with the addition of running the current more or less from the cerebellum to the respiratory nerves and muscles.

Mr. R. came for treatment while I was lecturing in Oswego, N. Y., suffering extremely from asthma,

with which he had been afflicted for a number of years. A few days previous he had suffered a terrible paroxysm. His physician was summoned in haste, stood, looked on and said he could do nothing for him; thought he would die in the paroxysm.

When he came for treatment it was truly painful to see him labor for breath. I found the large pectoral and respiratory nerves and muscles in a complete negative and contracted condition; patient could not by any means sit or stand in an upright position. He received eight treatments, when he declared himself well, being nearly as erect and elastic as when a young man (yet being about seventy years old). I pretend to say that no case can be treated strictly according to the principles laid down without being greatly benefited, and nearly all cases will be cured if treated a proper length of time.

RETENTION OF URINE.

We shall only refer here to that species where the urine is accumulated in the bladder, but unable to pass, in consequence of contraction of the mouth of the organ.

CASE—MRS. B——, OF BUFFALO, N. Y.,

Being in this condition some twenty-four hours, notwithstanding the most active and energetic ex-

ertions of her physician, was relieved in two minutes by the following treatment:

The lumbar vertebræ were made the points for the positive electrode, while the negative was being used over the bladder, in front, just above the pubic bone. By this means the organ was brought under the head or expanding end of the current, and thus the contraction overcome and relief obtained.

ASPHYXIA, OR SUSPENDED ANIMATION.

This takes place in consequence of the lungs not performing their legitimate function of respiration; therefore, oxygen and electricity (being the connecting link in the animal economy) being withheld, the patient dies in consequence.

Treatment: Pass the current *in* at the cervical and dorsal vertebræ, and bring it *out* at the lungs; or by means of electro-puncture with a gold or silver needle, enter the par-vagus nerve at the side of the neck. This latter method I would advise none to attempt but the practical anatomist, although a successful method. We see in this how infinitely important the lungs are in the animal economy, and that they do in reality occupy the position we have assigned them, viz: that of connecting man with the external world.

TRISMUS, OR LOCKJAW

This consists in a permanent contraction, or negative condition, of the muscles of the jaw. This is a very simple condition, and only requires an electrical change in the muscles concerned, when the cure is accomplished. Bring these muscles under the head of the current by the use of the negative electrode.

LECTURE SEVENTH.

Ladies:

I AM exceedingly happy in the thought of being permitted to address you this afternoon on the subject of health. We appear before you to discuss that class of suffering peculiar to your sex. A subject which, in our judgment, has not hitherto received that share of attention which its importance demands; a subject which should engross the most earnest and candid attention of every female in the land. "We live emphatically in an age of investigation and improvement, when light seems to be pouring in oceans on our world; and he who shuts his eyes, and then scoffs and sneers because others open theirs and see, is not only recreant to duty, but does society an irreparable wrong." History informs us that people lived anciently to a much greater age than at the present time. A person then, at the age of one or two hundred years, was

scarcely considered in his prime; and even in modern times, many instances are recorded where they have lived from one hundred to one hundred and forty, fifty and even sixty years; thus showing that man possesses most clearly all the elements of longevity. And yet, how terrible the thought, that now the days of the years of his life will scarcely average one score years and ten. Sir Walter Scott once remarked to his physician: "We are a machine made to live. Do not counteract the living principle by your drugs." It will not be expected, in the time allotted me, that I can enter into all the diseases to which your sex is liable, hence we shall confine our remarks in this lecture to those most common and grievous among you. The first condition we will name is,

PROLAPSUS UTERI, FALLING OF THE WOMB.

This may be considered the canker worm gnawing at the root and sapping at the foundation of female happiness and life. I am satisfied, from close and careful observation and long experience, that there is no one cause found in the whole catalogue of human casualties, that is so effectually operating to destroy the health and lives of the fair sex as this. It is difficult to find a lady nowadays, over twenty years of age, who is not suffering in a greater or less degree from this condition; and yet

very littly comparatively has been done by the medical profession to alleviate and cure it. True, many things have been done, and appliances made in the form of mechanical supporters, both internal and external, and yet we ask: What proportion of cases are radically cured by these means? If any, they are so small in number as scarcely to be worth naming.

Now, ladies, I beg leave to enter my protest, henceforth and forever, against the use of the external supporter, in this condition; and for the following reasons. First: If you will examine the anatomical structure of the female pelvis, you will perceive it is constructed somewhat in the form of a basin, from which it takes its name, and is composed of five bones; the sacrum and coccyx behind, illium on either side, and pubic in front. The different diameters of the cavity, including the soft parts, are as follows: The autero-posterior diameter, or, from the pubic in front to the sacrum behind, is about three and a half inches; while the lateral, or that from one side to the other, is about four inches. In this cavity are contained the bladder, womb and rectum. Now, if you will take notice of the locality and position of these organs, you will perceive that no pressure can be made in front, about the pubic bone, by a pad, without pressing the contents of the pelvis downwards, for the rea-

son that the pressure is made *above* the organs; hence there is no physiological adaptation in the external supporter, but a decided and positive injury. You will please bear in mind that the womb represents an inverted pear, and is supported by means of muscles and ligaments. Now let us turn our attention again to the question, what is disease? and also to the mechanical action of the current, and we shall not only see the philosophy of the condition in prolapsus, but the rationale of cure. Disease, as we have often had occasion to remark, is a loss of balance, &c. In the case before us, the muscles and ligaments are in a positive electrical condition, which condition always expands, and represents the head of the current: This being the case, hence the organ having no other support, must consequently fall from its normal position. In prolapsus, the *organ* is not necessarily at fault itself, by any means. The indication in cure is, to restore the balance of the forces in the ligaments, or polarize the parts, to do which you should observe the following rule, viz: Having reference to the best nervous communication, place the positive electrode at, or as near the lowest point of expanded muscles and ligaments as you can. Secondly: Close your circuit, by placing the negative back and above the positive, and at such a distance from it as shall make the entire expansion appear

between the positive electrode and the center of the two. Explanation: Your object being to produce contraction of the expanded parts, and as the first half of the current contracts, hence you should arrange the electrodes in such a manner as to bring the expanded parts within the contracting portion of the current.

Now let us apply this rule to the case before us. First: Having reference to the best nervous communication, &c., where would that be in this case? Ans: Internally; hence, attach the curved womb instrument to the insulator, and this to the positive pole. Introduce this into the vagina until the metallic ball forms contact with the womb, directing the patient or assistant to hold it by the wooden or insulated portion. Secondly: The rule says place the negative back and above the positive, at such a distance from it as shall make all the expanded parts appear between the positive and the center of the two. Question: Where would that be? Answer: To illustrate, suppose from the os uteri, or point of contact of the positive, to the upper point of the expansion, to be six inches; it follows, therefore, that the negative must be placed on the spine, at a distance of twelve inches from the positive or six from the center. Should you get the positive say one inch too low, making only eleven inches in space, you would thereby change the electrical cen-

ter half an inch, and thus fail to completely raise the organ. Perhaps you are ready to ask: How are we, who are comparatively ignorant of the structure and mechanism of these parts, to be able to judge exactly how much space is involved, and hence make a correct touch with the negative electrode? Your question being both very proper and important, we take great pleasure in answering it.

Suppose, as we before said, the parts involved occupy a space of six inches, and you close the circuit by placing the negative twenty-four inches above the positive, there will be no danger or evil arising in consequence, from the fact that as soon as you break your circuit, the healthy parts will balance themselves again; hence you are to bear in mind to place the negative high enough and not a particle too low. I will here make mention of barely one case, who was treated according to the above directions.

Mrs. ———, of Buffalo, N. Y., was taken while I was operating in that city, a few years since, violently with prolapsus uteri, and not willing to again submit to having it replaced by manual force, an operation which she had passed through some twenty-four times during the last ten years, we were called to see the case.

We found her suffering intense agony. Upon examination the organ was found to be just within

the labia. After closing the circuit as above directed, the organ moved to its place in half a minute, and the patient was perfectly easy. I hesitate not to say that a simple, uncomplicated case of prolapsus uteri, however bad, may be reduced without any inconvenience or pain to the lady, in from one to five minutes, in nine hundred and ninety-nine times in a thousand; indeed, we do not recollect to ever have seen a failure where those principles were strictly followed.

DYSMENORRHŒA, OR PAINFUL MENSTRUATION.

Although this condition may not be attended with any real danger to the patient, yet it is extremely annoying, and many times very painful. It is in consequence of a negative condition of the nerves going to the neck of the womb; hence the neck becomes contracted, and remains so until the catamenial secretion becomes coagulated in the organ, when the latter contracts upon it and forces it through the mouth, at which time, and in consequence of which, the pain is experienced.

The cure consists in relieving the spasmodic contraction, which is to be done by changing the electrical polarity of those nerves. Bring them under the action of the head or expansive end of the current, using the same instrument as in pro-

lapsus attached to the negative electrode, and with the positive treat on the spine over the lumbar vertebræ. You will perceive the treatment in this case is exactly opposite to that for prolapsus, for the reason, as you will readily see, that the electrical polarity of the two is opposite.

MENORRHAGIA, IMMODERATE FLOW OF MENSES, OR FLOODING.

This is a formidable disease, and often exceedingly dangerous from the excessive loss of blood, and requires the most prompt means for its arrest. It is in consequence of a loss of electrical balance in the nerves supplying the womb, having become positive or expanded, hence the mouths of blood vessels of the internal surface of the organ must be expanded (as heat expands), and the result is flooding. When we contrast the popular practice with that which we are about to submit, we think none can fail to see the advantages of the latter over the former in two very essential points at least, viz: in time saved and direct application.

While the means ordinarily used, as external applications over the parts, internal astringent injections, tampon, etc., to say nothing of their insufficiency, must of necessity require more or less time in their action, in consequence of not being applied directly to the parts at fault; and thus

precious moments, upon which hang the destiny of the patient, are lost. The latter method offers a specific, going with the rapidity of lightning directly to the part at fault, producing its effects instantaneously and without inconvenience to the patient, acting not in an arbitrary manner, but upon natural, philosophical laws. And this remedy is none other than electricity.

Now, when we consider man as an electrical being, and each separate nerve as a magnet, governed by the universal law of electric action, to which all other magnets are subject, and fully understand the law of electrical polarity, the nature and functions of the positive and negative forces, and that all the functions, operations and changes of the physical, ponderable body are under the control of these laws; I say, taking this view, it seems to me we have a basis upon which to establish a theory of disease and rationale of cure that will bear the closest investigation and scrutiny of the really learned and scientific; and we hesitate not to say, the closer and more thoroughly these laws are investigated, the more brilliant and beautiful will they appear. But to the case in hand: The termination of the nerves and blood vessels of the internal surface of the womb have become surcharged with electricity (or heat), and as that expands, hence the mouth of these vessels are opened, and their contents are poured

into the cavity of the organ. Now, the one thing to be done, as you will readily see, which is also acknowledged by all practitioners, is to close up the mouth of these exposed vessels. On this point we all agree; but on the method of doing it we are as dissimilar and diverse as the poles, only in consequence of a lack of knowledge and understanding of these grand laws.

Treatment: Introduce the womb director, attached to the positive electrode, within the organ, if the mouth or os is dilated, but if not, to the mouth. Close the circuit with the negative on the spine, on either the sacral or lumbar region, by which you may bring those nerves and exposed vessels within the inward or contracting portion, and changing the polarity from positive to negative, from expansion to contraction; hence the hemorrhage must of necessity cease.

AMENORRHŒA.

When females pass the age at which the monthly periods should appear without their appearance, this is called amenorrhœa. The time for the establishment of this function varies. In some it commences at the age of twelve, with others at fourteen, and others at sixteen. Perhaps the average may be stated at fourteen. This disease may result either from a general or a local cause, from a want of suf-

ficient vigor and vitality in the system at large, or from some local, organic derangement. These two causes are to be duly considered, and the treatment applied accordingly. You are not to set it down as a positive fact in all cases because your daughter has arrived at the proper age, and the function not established, that her case is dangerous or even alarming. This is not necessarily the case, yet you should keep close watch, and upon the slightest departure from health, ascertain whether it may not be in consequence of something wrong in this direction. Where the age in which the courses should make their appearance has arrived, and the lady's health is impaired, you should, by a careful diagnosis, ascertain whether there is any organic disease of the generative organs, which is acting as a hindrance to the establishment of the function, and if so, it should be removed by appropriate electrical treatment, directed according to the electric condition found; but in case you do not find any particular organic trouble, you are to direct your treatment with reference to the general condition of the patient. Where this function is delayed in consequence of a constitutional inability on the part of the system generally (as is more usually the case), it is because the system as a whole is in comparatively a negative condition, and hence the tonic treatment is indicated, directing more or less special

treatment (unless contra-indicated) to the organs of generation, by means of the womb instrument attached to the negative electrode and introduced within the vagina, and treating the whole length of the spinal column with the positive.

LEUCORRHŒA, OR WHITES.

In leucorrhœa there is a more or less abundant discharge of a white, yellowish or greenish mucus, which is the result of a negative condition of the mucus surface of the vagina or womb, and often both. After it has existed for a length of time, it partakes more or less of a poisonous taint, and hence requires the galvanic or chemical current to cure. The method of operating is precisely the same as in the preceding case.

COMMON ELECTRICITY.

Thales, a celebrated Grecian of the city of Miletus, in Ionia, who lived six hundred years before the Christian era, and who was the contemporary of Pythagoras, is reputed to be the discoverer of electricity in a substance called, in English, amber, and in Greek, electron, from which the term electricity is derived. He ascertained, probably by accident, that when rubbed it acquired a power of attracting to itself certain light bodies in its immediate vicinity. For want of amber, the student can illustrate the phenomenon with a stick of sealing wax. Pass the sealing wax, before being rubbed, over small bits of paper prepared for the purpose, and they will be found to be perfectly quiescent. Having excited it, however, by friction, it immediately exhibits a singular power unknown to it before. What is it that first diffuses over those bits of paper a tremulous quiver; then sets them upright as if alive, and

then makes them leap up, as if in affection or anger, to the cause of their momentary animation? Echo only answers—"What is it?" The chemist is puzzled and silent, the books answer not, and no one can tell. All that we know is, that it is electricity, and that its operations are guided by certain fixed and immutable laws. Apuleius, an eloquent writer of the second century thus speaks of him: "Thales, the Milesian, was decidedly the most eminent of the seven famous sages; for he was the first inventor of geometry among the Greeks, the most judicious inquirer into the causes of the nature of things, the most skillful observer of the stars; he made great discoveries by small geometrical lines, in the regulation of times and seasons, the theory of the winds, the course of the stars, the wonderful causes of thunder, the oblique motions of the planets, the revolution of the sun, and the reason of the increase, decrease and eclipse of the moon." From the time of Thales to that of Theophrastus, a disciple of Aristotle, who lived between two or three centuries after him, no new discoveries were made in electricity, which is somewhat surprising, since it is no local or occasional agent, but coeval with time, pervading all substances omnipresently, and being the palpable cause of some of the grandest scenes in nature. In a work of Theophrastus entitled, in Greek, "Peri Lithone," he ascribes the same property which Thales discovered in electron to the lapis lyncurius, the substance now called tour-

maline. "It possesses," says he, an "attractive power, like amber, and, as they say, attracts not only straws and leaves, but copper also and iron if in small particles." From the period of Theophrastus, we are informed that no allusion is made by authors, for more than two thousand years, to any but the discoveries already noticed; and, therefore, more than twenty-three centuries elapsed from the observations of Thales before any material additions were made to the stock of electrical knowledge. Since that, for the last two centuries, its accumulations have been vastly more important.

In 1600, William Gilbert, physician to King James I., in a Latin work entitled "De Magnete, Magnetesque Corporibus," gives a description of a great variety of electrical experiments, entirely new. By his experiments, Dr. Gilbert added largely to the meagre list of electrical substances. He ascertained that diamonds, sapphires, carbuncles, iris, opals, amethysts, beryl, crystal, bristol stones, sulphur, mastic, hard wax, hard rosin, arsenic, sal-gemm, rock-alum, common glass, and stibium or glass of antimony, have the power, when excited, to attract light bodies, and that this influence is not only exerted over leaves and straw, but, indeed, over all matter which is not extremely rare. He also ascertained that friction was necessary to produce electrical phenomena, that it was the most potential when light and quick, and that electrics could be most strong-

ly and permanently excited when the air was dry and the wind north or east. The learned Mr. Boyle, by his investigations towards the close of the seventeenth century, enlarged the catalogue of electrics somewhat, and ascertained by his experiments, that the electrical properties of bodies are increased by wiping and warming them before they are rubbed. Bodies of all kinds he supposed were attracted indiscriminately, and that this attraction took place in a vacuum as well as in the open air.

To this time philosophers had supposed that electricity possessed only an attractive power. For Dr. Gilbert, in his work, remarked that magnetism possesses both an attractive and a repulsive power, but that electricity possesses the latter but not the former. Boyle, however, approached so far towards the discovery of repulsion, that he remarked that feathers and other light bodies would cling to his fingers, after they had been attracted by electrics. Otto Guericke, who lived cotemporary with Mr. Boyle, and who is famed for his invention of the air-pump, made still further discoveries and improvements. He made use of a sulphur globe. By this apparatus he could accumlate a greater amount of electricity than had hitherto been accumulated, and was, therefore, enabled to experiment with greater success and certainty than his predecessors. To him is due the honor of making the first full and satisfactory discovery of electric repulsion. "A body

once attracted," says he, "by an excited electric, is repelled by it, and not attracted again, until it has touched some other body. He kept a feather for a long time suspended in the air above his sulphur globe, and made also the remarkable discovery, that when repelled by an excited body, it always keeps the same face towards that body as the moon does towards the earth.

Both Mr. Boyle and Otto Guericke discovered the electric light, simultaneously; the one, as he supposed, in the diamond, and the other in his excited globe. Dr. Wall, about the same time, discovered it in a still more satisfactory manner, which I will give in his own words:

"I found," says he, "upon swiftly drawing a well polished piece of amber in the dark through a piece of woolen cloth, and squeezing it pretty hard with my hand, a prodigious number of little cracklings were heard, and every one of them produced a flash of light, but when the amber was drawn gently and slightly through the cloth, it produced only a light, but no crackling; but by holding one's finger at a little distance from the amber, a large crackling is produced, with a great flash of light succeeding it. And what to me is very surprising, upon its eruption, it strikes the finger very sensibly, wheresoever applied, with a push or a puff like wind. This light and crackling seems, in some respects, to represent thunder and lightning."

Sir Isaac Newton next made the discovery that both electric attraction and repulsion will penetrate

through glass. Mr. Hawkesby, next in chronological order, wrote, in 1709, a treatise on electricity, in which he published a variety of new facts with regard to attraction and repulsion, and the nature of electric light, supposing it to be phosphoric. Others, who first observed it at this period, adopted the same opinion. It was formerly a mooted question with philosophers whether there were two distinct currents of electricity or only one. While Du Fay, Symmer, Coulomb, Turner, Thompson and others, believed that there were two, with opposite inherent natures, Dr. Franklin, Epinus and Cavendish maintained as positively that there was but one.

Dr. Turner, in his elements of Chemistry, says: "On comparing the electric properties manifested by glass and sealing-wax when both are rubbed with a woolen or silk cloth, they will be found essentially different; and hence it is inferred that there are two kinds or states of electricity, one termed *vitreous*, because they are developed on glass, and the other *resinous* electricity, from being first noticed on resinous substances. These two kinds of electricity, one or the other of which is possessed by every electrified substance, are also termed *positive* and *negative*, the terms *vitreous* and *positive* being used synonymously, as are *resinous* and *negative*. The mode of distinguishing between positive and negative electricity is founded on the circumstance, that if two electrified substances are

both positive or both negative, they are invariably disposed to recede from each other, that is to exhibit electric repulsion ; but if one be positive and the other negative, their mutual action is as constantly attractive. The end of a silk thread, after contact with an electrified stick of sealing-wax, is repelled by the wax because both are in the same electric state ; but if a dry warm, wine-glass be rubbed with cloth or silk and presented to the thread, attraction will ensue. A silk thread in a *known* electric state thus indicates the kind of electricity possessed by other substances ; a convenient mode of doing this is to draw a thread of white silk rapidly through a fold of coarse brown paper previously warmed, by which means its whole length will be rendered positive."

Dr. Franklin, the celebrated electrician of our own country, took strong and decided ground against this doctrine. For it he substituted the more simple theory of one fluid, and attempted to account for all the various phenomena of attraction and repulsion by the different states, or degrees, or volumes of electricity, which he called *plus* or *positive* and *minus* or *negative* When any body had more than its natural share it was considered to be in a plus or positive state, and when less than its natural share, it was considered minus or negative. Bodies upon this principle are positive or negative relatively, or positive and negative absolutely. They are positive and negative *relatively* when

they are both plus, but when one has a greater amount than the other. They are positive and negative *absolutely* when one has *more* than its natural share and the other less. But in each of these cases there is attraction, though much more feeble in the former than in the latter case. Epinus, a celebrated electrician of St. Petersburg in Russia, maintained with Franklin that there is but one fluid, and accounted for all phenomena of attraction and repulsion, including the repulsion of two negatives, upon the hypothesis that there must be a reciprocal affiinity or attraction between ponderable and imponderable matter, and that the particles of each must be mutually attractive to their opposites, and that this attraction and repulsion exerts itself in the ratio of inverse proportions according to the squares of the distance.

Brewster says: "The opinions of Franklin, reconciled by Epinus, are based upon these three propositions. 1st. Ponderable matter repels its own particles. 2d. Imponderable matter repels its own particles. 3d. They have a mutual attraction for each other. But this might seem to convey the idea that ponderable matter by its attraction exhibits inherent activity, which is contrary to fact, for ponderable matter of itself I hold to be perfectly inert. We must examine further, then, to find a philosophical solution for the enigma. Such a solution I think I have found. It is no where even hinted at in the books. But because it

is not, let no one suppose that I am about to advance a mere fanciful hypothesis, based on no solid foundation of fact. My solution of the difficultly will be derived from a law of electricity, which, although it seems to have escaped the attention of chemists, can nevertheless be demonstrated. It is this: Every ultimate particle of electricity has opposite polarities—that is, each end of each individual particle has a different property—*like* ends or polarities repel, and *unlike* ends or polarities attract. This I intend to prove conclusively, by the aid of that immutable truth, that *the laws of a whole are the laws of its parts*, and by the operation of the rule so proven, I intend to show that all the phenomena of attraction and repulsion among both atoms and planets can be rationally accounted for. Electricity and galvanism are at the present day generally conceded to be the same agent. Now, if you pass a current of galvanism around soft iron, bent into the form of a horse shoe, and wound spirally with insulated copper wire, you make the iron magnetic, and the two ends have different polarities. By different polarities, I mean, that what one end will attract the other will repel, or the one is negative and the other is positive. But by changing the poles of the battery and passing the current of electricity in a different direction around the spiral wire, you change the polarity of the iron, and make the end that was positive, negative, and the end that was negative, positive, which can be shown

by experiments in electro-magnetism. So, then, positive and negative in this case depend upon the direction in which the current runs, for the current runs *inward* at one end and *outward* at the other. The end where the current is *inward* is *always negative*, and that where it is *outward* is *always positive.* And why is this invariably so? There must be a reason for this phenomenon. Its solution is readily found in the admirable rule, that the *laws of the whole are the laws of its parts.* If a current of electricity, running in a certain direction, makes one end of a bar of iron positive and the other negative, each individual ultimate particle of that current must have an agency in producing such a result, and, therefore, each individual particle must have a positive and negative end, the positive end always leading and the negative, of course, always following. We infer this from the fact that the laws of the whole are the laws of its parts, or the laws of its parts are the laws of the whole; for it would be utterly impossible that the whole of a thing should have a quality the *opposite* of the *parts* of which it is composed. If you pass the galvanic current around the steel spirally, in the same way as it is passed around the soft iron, you make it permanently magnetic; the end where the current is *inward* is *negative*, but the end where it is *outward* is *positive.* So it will remain for years. Now you may cut up that bar of steel, which is thus made magnetic, into ten thousand pieces, and each piece will have

a positive and negative end, and the positive and negative polarities of the pieces, will be arranged in the same direction as in the whole. What, then, is the unavoidable inference? Why, that *each ultimate particle* of the *electricity* that made it magnetic, and kept it magnetic, has *opposite polarities* as well as the whole current, because the polarities of the whole are most assuredly made up of the property of its parts. A mere thimbleful of the atmosphere, for instance, contains its relative proportions of oxygen and nitrogen as well as the whole mass. A drop of water contains its relative proportions of oxygen and hydrogen as well as the ocean, and so with everything else. Having, by fact and by argument, attempted to prove that each end of the ultimate particles of electricity has opposite polarities, that the positive end is always presented in the outward current, and the negative end, of course, in the inward current, we will now apply this theory to the explanation of the phenomena of attraction and repulsion."

"But first, to show that the facts are true which we have stated, we can prove them by an experiment with two magnets. If, for illustration, two steel magnets with like powers be dipped into iron filings until they have accumulated as large an amount as they can retain upon their poles, and the opposite poles of each be then presented within a short distance of each other, the filings will spin out and fill up the space be-

tween them, and exhibit an oily, ropy appearance. But, if like poles be presented, the filings will be blown back as it were, and stand out like hair around the points of the magnet. This shows that there is attraction in the one case and repulsion in the other. Now, then, for the explanation of the attractions and repulsions of common electricity by this theory: A body which is charged plus or positive has an emanation or outward current. Such a body will attract a body charged minus or negative. And why? Because, as we have shown by the magnets, the outward current of the body charged plus presents its positive end. But a body in a minus state has an inward current of electricity, which attracts from contiguous substances. Of course the negative end of the ultimate particles of this inward current is presented. And what is the consequence? Why, two bodies, the one having an outward and the other an inward current, present opposite polarities to each other, and are attracted from the operation of the immutable law that opposite polarities attract. We now come to the solution of that difficulty which perplexed Dr. Franklin so much—the repulsion of two negatives. When two bodies are minus or have *less* than their natural share, the current of electricity is inward in both. Now if, while the two currents are inward, the bodies in a minus state be brought near each other, they are repelled, because both currents being inward, the negative ends of the

ultimate particles of each current are presented to each other, and they are repelled upon the principle that like polarities repel each other."

ATMOSPHERIC ELECTRICITY.

Several centuries ago the Romans conjectured that the lightning of the clouds was due to electricity alone, and that it was indeed the same as electricity artificially produced by means of friction, accumulated and discharged by the Leyden jar; but no one could prove it. In 1752, Franklin obtained the proof by means of his famous kite, which electrified the world. Having prepared his kite, with a large silk handkerchief having two cross sticks, he, with no one but his son, walked out into a secluded field at the approach of the first thunder storm, and with the help of his son raised it into the atmosphere. He waited some time with anxious and breathless expectation. One well charged cloud had passed, and no effect upon his kite was perceptible. Just, however, as he began to despair of success, he noticed that some of the loose threads around his

hempen cord, which had by this time become a better conductor than at first, owing to the moisture accumulated upon it, would stand out and apparently avoid each other. Encouraged by this favorable appearance, he presented, though at the risk of his life, his knuckle to the key which he had tied to the end of the cord, and received a strong spark, attended with a loud snap. Others more brilliant still, and in quick succession, followed, and thus was fully proven by Franklin the identity of electricity and the lightning of the clouds.

This experiment was attended with extreme danger, as was subsequently proven in the fate of the talented and lamented Prof. Richman, of St. Petersburgh. The circumstances of his death are thus detailed by Thompson: "He had provided himself with an instrument which he called an electrical gnomon, the use of which was to measure the strength of electricity. It consisted of a rod of metal terminating in a small glass vessel, into which he had put some brass filings. At the end of this rod a thread was fastened, which hung down by the side of the rod when it was not electrified, but when it was, it avoided the rod and stood at a distance from it, making an angle at the place where it fastened. To measure this angle he had the arch of a quadrant fastened to the bottom of the iron rod. He was observing the effect of the electricity of the clouds, at the approach of a thunder storm, upon his gnomon, and of course standing with his head inclined towards

it, accompanied by M. Solokow (an engraver whom he frequently took with him to be a joint observer of his electrical experiments, in order to represent them the better in his figures), when this gentleman, who was standing close to his elbow, observed a globe of blue fire, as he called it, as big as his fist, jump from the rod of the gnomon towards the head of the Professor, which at that instant was about a foot distant from the rod. This flash killed Mr. Richman, but Mr. Solokow could give no account of the particular manner in which he was immediately affected by it. For at the same time that the Professor was struck, there arose a sort of steam or vapor, which entirely benumbed him, and made him sink down upon the ground, so that he could not remember even to have heard the clap of thunder, which was very loud. The globe of fire was attended with a report as loud as that of a pistol. A wire which brought the electricity to the metal rod was broken to pieces, and its fragments thrown upon Mr. Solokow's clothes. Half of the glass vessel in which the rod of the gnomon stood was broken off, and the filings of metal that were in it were thrown about the room. The shoe of the Professor's left foot was burst open, and there was a blue mark on his foot at that place; from which it was concluded that the electricity had entered by the head, where there were evident marks of injury, and made its way out again by the left foot." M. de Romas made the experiment with the kite in a more

perfect manner than the first attempt of Dr. Franklin. He twisted a fine iron wire into the cord of the kite. To prevent the observer from being exposed to danger, the lower extremity of the cord terminated in a silk cord, eight or ten feet in length, by means of which the kite with its string was insulated. Instead of drawing sparks with the finger, which makes the observer himself receive the charge, he received them by means of a metallic conductor, connected with the ground by a chain, which he held in his hand by means of an insulating glass handle, so that it resembled our common discharger. Romas describes the sparks given out from the string to this discharger during a thunder storm, in a letter to the Abbe Nollet, in very glowing language. "Conceive," says he, "plates of flame nine or ten feet long and an inch thick, which makes as much noise as a pistol. In less than an hour I had certainly thirty plates of this size, without reckoning a thousand others of seven feet and below that. But what gave me the greatest satisfaction in this new spectacle was that the greatest of these plates were spontaneous, and that notwithstanding the abundance of the fire which they contained, they fell always on the nearest conductor. This constancy gave me so much security that I was not afraid to draw sparks by means of my conductor, even when the thunder storm was at its height, although the glass handle of the instrument was only two feet in length. I conducted where I pleased, without feeling

in my hand the smallest commotion, sparks of fire six or seven feet long with the same facility as those whose length did not exceed seven or eight inches."

ELECTRICAL MACHINE

FOR PRODUCING FRICTIONAL OR ATMOSPHERIC ELECTRICITY.

This machine consists of a revolving cylinder or plate of glass, mounted on insulated legs or posts of glass, and submitted to the friction of cushions or rubbers, which must also be supported by an insulated leg. We prefer the plate machine to the cylinder, as its power is greater. For practical purposes the plate should be at least twenty inches or more in diameter. The surface of the rubber must be renewed from time to time with a coating of amalgum, which can be procured of any philosophical instrument maker. The room for operating the electrical machine should be dry. When the air is humid, the plate, the insulated legs or posts, the prime conductor, and in fact every part of the machine, should be rubbed with a dry, hot cloth, in order to free it not only from moisture, but also from dust. The Leyden Jar, an accompaniment of the electrical machine, was invented by Cunæus, Muschenbrœck and Allamand, at a very early period of electrical science.

A half gallon glass jar is evenly coated on the outside, bottom and all, about two-thirds of its length from the bottom, with tin foil. Its mouth should be closely

stopped with a wooden stopper. Through the center of this stopper pass a brass wire the size of a crow-quill, tightly fitting, letting the lower end of the rod extend say two inches below the stopper, and to the end of the rod attach a piece of fine metallic chain, a few coils of which should rest on the bottom of the jar. The upper end of the rod should extend above the stopper some four to six inches, terminating in a brass knob or ball half an inch or so in diameter.

The discharger is a necessary appendix to this machine. It consists of adjustible metallic arms, tipped with brass balls and provided with a long glass handle and a yard or so of fine brass chain. To be prepared to use frictional or atmospheric electricity as a therapeutic agent, we need the insulating stool, or if a common chair or bed is used, place a glass castor under each post. There are various methods of administering electricity by means of the electrical machine, and different results follow the different methods of using, some of which we will detail. In order to fill the patient with positive electricity, he must be insulated by placing him on the insulating chair or stool, or in the absence of these use a common chair, placing a thick glass castor or tumbler under each post. Into the chair thus prepared let the patient stand or sit, but if in a sitting posture great care must be observed that the feet and clothing are kept a proper distance from the floor, and also from all surrounding objects, as they stand in a

highly negative relation to him, thereby preventing a perfect insulation of the patient. The atmospheric machine should be placed on a table a yard or more from the patient. This also should be at a respectful distance from objects. Now, attach one end of the fine chain to the extreme brass ball belonging to the prime conductor, letting the patient hold the other end. All things being thus arranged, commence turning the crank attached to the glass wheel. After a few revolutions of the wheel, if all works well, and the machine and patient are free from moisture, the ends of the patient's hair will begin to rise, and after several smart revolutions it will stand upright. The patient is now perfectly charged with positive electricity, and will remain so as long as the glass wheel is made to revolve, but as soon as that ceases, the atmosphere and surrounding objects standing in a negative relation to the patient, in consequence of the immutable law governing all bodies, and the law of equilibrium, the electricity commences to leave the positive patient and passes to the surrounding negative objects. This will continue until an equilibrium is again established between the patient and objects about him, when he will be found to be in the same condition as before the charging. While he is filled with electricity as above described, if he is suddenly touched with the discharger in the hands of another person, or with the person's finger, he will emit a spark, accompanied with a crack or snap, at the point

touched, which will also be attended with a tingling or smarting sensation, and at the instant of being touched the hair, which was standing erect, may be seen to drop. If the patient be thus charged in a dark room, he will present a luminous appearance.

It is a matter of considerable interest, and, in a practical point of view, of great importance to understand the reason and the philosophy of the phenomenon witnessed, for there are many pathological conditions in which atmospheric electricity is to be preferred to the other modifications.

The electricity of the frictional machine is obtained from the atmosphere by means of friction, and thus it is denominated atmospheric. By turning the crank the friction occurs at the point where the cushion or rubber hugs the glass wheel, at which point the electricity is accumulated. It passes from this point, by means of the wheel, to the fine metallic points or teeth, which are in close proximity to it, to the prime conductor, and from this through the chain to the patient. Now, if the patient is insulated as above described, he is thereby in a good degree cut off from communication with the earth, and thus the electricity is retained by him, instead of being allowed to pass off, as it otherwise would do. On suddenly presenting the discharger or end of the finger to the patient, we have said there was a spark (accompanied by a snap or crack) elicited. This is in consequence of the electricity being discharged at

that particular point, on the same principal that causes the lightning and thunder of the clouds. The two opposite forces, viz: the positive and negative, meet, and they, having an electrical affinity for each other, rush together, balancing themselves, and thus establishing again an equilibrium. We have before remarked that if the glass wheel is allowed to remain motionless for a short time, the patient would lose the electricity gotten by induction. This is because the surrounding objects being in the opposite state, or negative, to the patient, and now, by virtue of the immutable law controlling electricity in matter, there is an affinity or attraction between the two; the surrounding objects being negative, they receive from the patient, being positive, until he shall have no more than they, which again constitutes an equilibrium between the two. Another method of administering atmospheric electricity is by means of a shock. Remove the insulating glass castors or tumblers from under the patient's chair. Give him the discharger, or let an assistant use it, holding it by the glass handle. To the metallic end attach one end of a fine metallic chain. We would here remark that this chain should be covered, except its ends, with gutta percha, in order to prevent the current from passing from it to the patient while using. The operator, connecting the other end of the chain to the external coating of the Leyden jar, handles the jar by means of this coating, keeping a finger on the end of the chain so as

to keep it properly connected with the jar. Now, suppose he wishes to pass a spark through any given part of the body, as, for instance, an arm. To illustrate: Suppose he wishes to operate on the left arm; the patient, if *he* handles the discharger, holds it in the right hand, bringing the metallic ball in contact with the hand or ends of the fingers of the arm to be operated on. The operator, after making two or three smart revolutions of the wheel, presents the ball of the Leyden jar to the prime conductor, withdrawing it in an instant, and with it, that is the same ball, he immediately touches the point of the patient's left shoulder, or the spine between the shoulders. At the instant this touch is made, there will be a crack more or less audible, in proportion to the quantity of electricity that was in the jar, and the patient will experience the shock instantaneously through the arm, but more particularly at the part in contact with the ball of the discharger. Great caution should be used in administering this form of electrical treatment, as too powerful a shock would be exceedingly unpleasant, and might be rendered dangerous to the patient, especially when passed through very sensitive or more highly important parts of the body, as the eye, heart, lungs or brain. In order to avoid this when treating these parts, the operator should see to it and allow but the smallest quantity of electricity to enter the Leyden jar. This is to be done by observing the revolutions of the wheel. In a very dry atmos-

phere, when the machine is in *prime* order, and every thing works favorably, even the slightest motion of the wheel will furnish enough electricity to render it sensible to the patient when passed through the brain or eye. If in case it should be desirable, as it often is, to pass the current through highly sensitive portions of the system, unaccompanied by the shock, it may be done as follows: Suppose an eye is to be treated, with a view of augmenting or increasing the electrical forces in the organs, and at the same time to prevent the general system from receiving the impression of the current. Process: Connect one end of the conducting chain or electrode to the prime conductor, and the other end to the ball or rod of the Leyden jar. Connect another chain, one end to the brass globe standing near the rubber of the machine, and the other end to the discharger. Let the patient or assistant, apply the ball of the discharger snugly to the eye, while the operator presents the ball of the Leyden jar firmly to the back part of the head or to any other part from which he wishes to send the current. The following caution should be adhered to: All things being ready, before closing the circuit on the patient, see that the prime conductor and the Leyden jar are both completely exhausted. In the next place, be particular that the balls are properly adjusted to the patient before the glass wheel is allowed to stir. After thus closing the circuit on the patient, commence turning the wheel carefully and

continue for a longer or shorter period, according to the requirements of the case. Should the organ be plus or positive, thereby requiring a dispersion of the current, you are to reverse the treatment; *i. e.* use the Leyden jar to the eye, and the discharger, *not* at the back of the head in all cases, but at some remote point, for reasons which will appear hereafter. If the patient is charged on the insulating stool, and it is wished to discharge him at the eye, or any other sensitive part, *unaccompanied* by a shock, prepare him according to directions for insulation, observing the precautions above, viz: bring the ball of the discharger in contact with the eye *prior* to turning the wheel. In using the Leyden jar it often becomes necessary to discharge the electricity from it. This should be done in the following manner: If the double or two-pronged discharger is used it should be in *one order*, and that is, *first* make a ball to come in contact with the *ontside* of the charged jar before the contact is made with the knob on the top of the jar; for, should the reverse order be taken, *i. e*, to touch the knob *first*, and *then* the outside of the jar, it will be very likely to break, and thus spoil the jar for future use. In case the *single* pronged discharger is used, connect one end of the chain to it, allowing the other to trail on the table or floor. Set the jar on the trailing end, after which bring the ball of the discharger in contact with the knob of the jar, when a bright flash, accompanied by a report, will be perceived.

I would here remind the reader of another caution of vital importance. While handling the Leyden jar the greatest care must be observed not to come in contact with the knob or rod of the jar, as in that case the most serious and often fatal results might follow.

Some years since, a gentleman while in my office picked up the Leyden jar, presented its ball to the prime conductor, after having made one revolution of the wheel, and seeing him about to touch the knob with a finger while holding the jar with the other, I instantly gave him the caution; but he remarked that he understood all about it (by the way, he was a *teacher* of science), and touched the ball. The result was it came within one of prostrating him upon the floor, and to use his own language, he said he never took such a tremendous shock since he was born.

While treating a lady for partial deafness, in attempting to press the knob of the jar to the ear, she suddenly changed her position a little, which resulted in bringing the point of her shoulder in contact with the outer coating of the jar, at the same time that the ball touched the ear. Result, she was knocked out of the chair in which she was sitting, and landed some four feet from it, on the floor, but her hearing was restored. Thus we see the absolute necessity of using the utmost caution while handling the Leyden jar.

GALVANISM.

Galvanism is another form or modification of electricity which is perhaps in most common use in the cure of disease. It takes its name from Galvani, Professor of surgical anatomy at Bolgna, who was its reported discoverer, and a scholar of eminence. These were the circumstances of the accident (for accident it was) which led to the discovery: Mrs. Galvani, at a certain time during the absence of her husband, observed the effect which electricity exerts upon the muscles of dead animals through the medium of the nerves, from the accidental contact of the conductor of an electrical machine with the crural muscle and lumbar nerve of a frog's leg which had been dressed for food, and was lying upon a table near the machine in the professor's laboratory. This contact immediately produced violent convulsions in the frog. These Madame Galvani happen to observe and related them to

her husband upon his return. As he was at that time investigating the subject of animal electricity, he seized upon the idea with avidity, and repeated the experiment in a variety of ways with success. The frogs after having been dressed, were sometimes hung up by the spine on metallic hooks which were attached to the iron pallisades. Whenever, by the blowing of the wind, or by any other cause, they were made to swing so to touch the pallisades, they were thrown into convulsions. The professor, who observed it, was at first quite puzzled to account for the phenomenon. He, however, imputed it to the animal electricity. Professor Volta, of Pavia, objected to this conclusion, and affirmed that it must be the effect of the electricity produced by the contact of two metals, and that the muscles and nerves of the animal were only the medium through which it was conducted, and that the convulsions were produced by the effect of that electricity upon those muscles and nerves. This conflict of opinion resulted in establishing the theory of Volta, that by forming a certain connection between different metals, electricity is produced.

One of the simplest galvanic batteries is that in which a piece of zinc is placed beneath the tongue and a piece of copper above it. Then whenever the edge of the two metals thus situated is brought in contact there will, whether the eyes be opened or closed, be perceived a slight flash of galvanic light. The

flash will be produced as often as the metals are separated and brought together again. This form of electricity is produced by chemical action. It is found that when two metals are placed in close proximity to each other, excited by some liquid capable of acting upon one more than upon the other, electricity of a peculiar character is developed. The peculiar electrical relations of the metals employed also exerts an influence upon this result. They must stand in an opposite electrical relation to each other; that is to say, one must be positive and the other negative, relatively. The metals most commonly used are zinc and copper, or zinc and platinum. The liquid used must contain an acid having a strong affinity for the zinc. The following are the results of this combination: The polarity of the zinc is positive, while that of both the copper and the liquid is negative. Therefore, in harmony with the law in governing attraction and repulsion, the action must of necessity be between the liquid and the zinc. Now, by keeping in mind the universal law of electrical polarity of all bodies, we may readily understand the direction of the current in this case, which is *from* the positive zinc, through the negative liquid, *to* the negative copper. In order to close the circuit without the vessel, connect the two plates by a copper wire, by doing which the current of electricity, or galvanism, leaves the series upon the wire connected to the copper plate, and returning,

enters it upon the one attatched to the zinc. Thus the current is passing *from* zinc *to* copper within, and from copper to zinc without the series. The wire attached to the copper plate is the positive pole, and the one attached to the zinc the negative. There is an electrical influence propagated in a certain unchanging direction by these different poles, hence it is necessary that the signification of the terms should be understood.

Professor Faraday proposes a nomenclature of electricity, which has been more or less adopted. He calls the poles electrodes, from the Greek ἤλεκτρον and ὁδός, that is, the ways or paths of electricity. The positive pole, the *anode*, from the Greek ἄνοδος, and ascending or entering way, and the negative pole, the *cathode*, from the Greek κάθοδος, a descending way, or path of exit. The terms positive and negative pole are however more frequently used to designate the opposite forces of a current of electricity. There may be both an acid and alkaline taste perceived in a strong galvanic current; acid at the positive pole or negative end of the current, because the current *there* is inward, and alkali at the negative pole or positive end of the current, because it is *there* outward. To taste it, connect one pole with the wet hand and the other with the tongue.

Why will the current on entering the tongue produce an acid taste, and on leaving it an alkaline?

It must be something inherently residing in it,

producing certain chemical changes in the system, according to the course of its passage.

Let it be remembered that one end of its ultimate particles is entirely opposite in its nature to the other end; for one end of a current is attractive and the other repulsive; and as the laws of a whole are the laws of its parts, then of course each atom of that whole has an attractive and a repulsive power, by the opposite polarity of its opposite sides. If, then, as is demonstrated in the experiment just referred to, the *whole* current has a taste just in accordance with the direction in which it runs across the tongue, *each* ultimate particle which aids in constituting that current has also a taste, in accordance with the direction in which *it* runs, as may be proven by the same process of reasoning.

Pass a current of electricity through a bar of iron a foot long and one-half of the bar will be found to possess a positive and the other half a negative polarity. The half between the positive pole and the center of the bar will be negative, because it represents the inward movement of the current, while the half between the center of the bar and the negative pole will be positive, because it represents the outward movement (the terms positive and negative being used relatively). Were steel used in place of iron, the magnetic effect would be much more permanent.

After thus charging, if we cut the steel into ten thousand pieces, we shall find that each separate piece maintains its distinct polarity as perfectly as did the whole bar before being cut. The first half of the first piece, or that which was in contact with the positive pole, will be found to attract the positive end of the needle because it is negative, while the last half of the same piece will repel the same end of the needle because it is positive. Being governed by the immutable law of attraction and repulsion, the above must be the legitimate results. Examine the second piece, and we shall find the same results precisely, and the same will be true of each separate piece without regard to numbers, proving beyond a doubt that the law of the whole is the law of its parts, and the law of a part is the law of the whole.

On the same principle take, for instance, a strong magnet and with it pick up a tack; now the current is outward from the magnet, and consequently positive, and inward in the first half of the tack, and consequently negative. Attach a second tack to this and the current is outward from the last half of the first tack, and inward in the first half of the second; maintain this order through the entire series, be it composed of few or many. The first half of each is negative, because the current is there inward, while the last half of each is positive, because the current is there outward. And thus it is with each ultimate particle composing the tacks.

NOTICE TO THE PUBLIC.

THE author wishes to say, that in the treatment of disease by means of electricity, although the theory by which you are guided may be perfect, yet, without proper machinery you cannot expect success. Hence, it is of the utmost importance in order to insure the greatest success: First, that you have a sound theory, and then, the right kind of machinery. He has examined neary all the various kinds of Electro-Magnetic machinery which have been manufactured in this country. There are many machines, now-a-days, claiming to possess four or six different currents, which only exist in name, as but two distinct currents can be obtained from the same helix, viz., the first or primary, and secondary or induced. Again, there are many claiming two distinct currents, while they actually possess but one; hence, as it is not easy for those unacquainted with electrical apparatus to detect these differences, he advises the use of no kind except his own, and shall not consider himself responsible for the failures resulting from the use of other kinds.

Prof. W. R. Wells' Double Current Electro-Magnetic Machine, manufactured by Dr. Thomas Hall, Manufacturing Electrician, No. 19 Bromfield Street, Boston, Mass., can be obtained at the manufactory or of the author, at the following prices: Machine, without a case of Treating Instruments, $19; Machine, with a full, complete case of Treating Instruments, $25.

That other kinds of Electro-Magnetic Machines may relieve pain, or cure some slight disease, he doubts not; but, that they are exceedingly uncertain and doubtful in their action, he is perfectly assured, and, hence, cannot recommend them to the student.

In conclusion he will say, that nowhere in his work does he give any direction or authority for *shocking* the patient; but, on the contrary, he strictly and wholly repudiates the idea. If the rules laid down in the work are strictly followed, there will be no unpleasant sensation whatever attending the treatment. He would also say that he fully believes, that in every application where the rules *are* strictly followed, more or less benefit will result, and that it will cure in all curable cases, when fairly tried.

AUTHOR.

COMPLIMENTARY.

The following are a few of the Complimentaries received by Prof. Wells, from his classes:

BUFFALO RESOLUTIONS.

We, the undersigned members of a class, have listened to a course of Lectures and Instructions delivered in our city by Prof. W. R. Wells, on the subject of Electricity; and feeling it to be not only right and proper, but highly obligatory on us to express our views in relation to the same, would therefore say, that we have listened with the most profound and increasing interest to the Doctor's course of Lectures. His theory of disease and cure is new, beautiful, rational and scientific. He has clearly demonstrated to our entire satisfaction, as well as to the satisfaction of the *many* who have been cured of obstinate diseases, that electricity, when used in accordance with certain laws and principles as taught by him, is capable of performing the most astonishing cures known to the medical world. That the Professor's theory is new, and unknown to the schools of medicine, is beyond all question. It is eminently worthy an important position in the ranks of medical science, and no physician should be without it.

In behalf of the class.

Dr. I. J. Meechum, *Chairman.*

Buffalo, March 8th, 1859.

OSWEGO RESOLUTIONS.

At the close of a course of Lectures delivered in our city by Prof. W. R. Wells, on the subject of Electropathy, the members of the class passed the following resolutions, unanimously:

Resolved, That we have been deeply interested in the system of electropathy as taught by Prof. Wells; that he has taught a *New*, *Rational*, *Scientific*, and, we believe, the most *Valuable* theory of disease and cure.

Resolved, That, in our judgment, the views advanced and so clearly proven by Prof. W., are not only new to those *outside*, but to the *medical profession* also; and that no person is prepared to do justice to the patient without a knowledge of these great and important *laws*.

Resolved, That we most cordially commend the Professor and his theory to the public, and bid him God speed, as we believe his mission is one of benevolence and mercy, and calculated to benefit mankind.

By order of the class.

Rev. A. J. PHELPS, *Chairman*.

OSWEGO, January, 1861.

COLUMBUS RESOLUTIONS.

At the close of the second course of Lectures on the questions, "What is disease, and what is its remedy?" delivered in our town by Prof. W. R. Wells, the pupils in both classes unanimously adopted the following preamble and resolutions:

Whereas, We have enjoyed the opportunity and pleasure of listening to the able and interesting lectures of the Professor; and whereas, we believe in letting our light shine for the benefit of others; therefore,

Resolved, That we believe the questions, "What is disease, and what is its remedy?" have, in our opinion, been ably and fully answered by the Professor, in accordance with that law by which God governs the universe of *mind* and *matter*, and is as unchangable as its Author.

Resolved, That we hold to the doctrine that unbelief and ignorance are no match for faith and knowledge; hence, we are not to be cowed down nor moved from the rock on which our feet are placed, by the cry of humbug, coming from those who have never investigated this subject, and have not the manhood and ingeniousness to do so.

Resolved, That it is due from that class of persons known as the medical faculty, in whose hands to a great extent are placed the health and lives of the community, that they do most thoroughly and honestly investigate this subject, and expose its fallacies, if any it has, or adopt its principles.

Resolved, That the method of diagnosis, as taught and demonstrated by the Professor, challenges our unbounded confidence and admiration, and we fully believe that in the hands of a skillful practitioner, it cannot fail to detect and locate any disease, and that this alone, if adopted by the medical profession, would prove of incalculable value to a suffering world.

Resolved, That those medical practitioners who, in their own estimation, are too wise to learn, and too prejudiced to investigate a new theory, are, in our opinion, unworthy of our confidence and patronage, and should be brought under the head of the current of truth, until its radiating and expanding influence upon their contracted minds shall constrain them to acknowledge that they see light.

Resolved, That we have the fullest confidence in Prof. Wells, as an able and honest expounder of his new theory; that he has a most happy manner of delivery and faculty of illustration, that cannot fail to both interest and instruct all who will listen to him, and that we believe him to be both a gentleman and a scholar.

Resolved, That we hail this new theory as the great desideratum of the age, and the harbinger of a new era in medical practice, a bright star of hope to many a desponding sufferer.

Resolved, That we tender our warmest thanks to the Professor and his estimable lady for that urbanity, humane and kindly feeling that uniformly distinguishes them, interwoven with their pupils; and that we commend them to all mankind, but especially to the suffering.

In behalf of the class.

J. C. BRAINARD, *Chairman.*

J. C. CARR, Esq., *Secretary.*

COLUMBUS, Wis., Jan. 23d, 1862.

FULTON RESOLUTIONS.

At the close of a course of Lectures delivered in our town by Prof. W. R. Wells, on the very important and entertaining subject of Electropathy, the members of the class organized by calling Prof. J. G. Griffin, Principal of Fulton Seminary, to the Chair, and Rev. H. W. Titus to act as Secretary; whereupon the following preamble and resolutions were presented by Prof. A. Boothby, and

unanimously adopted by the class, and a copy of the same ordered to be presented to Dr. Wells:

Whereas, Prof. W. R. Wells, M. D., has delivered a series of lectures before us, as members of his class, on the subject of electricity as a remedial agent; and whereas, the importance of the system of electropathy, considered in the light in which it has been so ably presented to us, deserves our highest commendation; therefore,

Resolved, That we have listened with peculiar and increasing interest to the Doctor's course of lectures, and that he has presented MAN, both in health and in disease, in an entirely new aspect.

Resolved, That the Professor's theory of disease and cure is entirely new to us, and we believe to the *world*, as we have never before seen or heard anything like it; and we believe it as *useful* as new, being strictly scientific and rational. The Doctor has a happy faculty of illustrating every point, so that if any fail to understand it, it is *their* own fault, and not his.

Resolved, That the deportment of the Professor has been that of a gentleman and scholar, a lucid and thorough instructor, and that we commend him and his accomplished lady to the diseased, and we earnestly commend the Professor's theory to the candid investigation of *all*.

In behalf of the class.

Prof. J. P. GRIFFIN, *Chairman*.
Rev. H. W. TITUS, *Secretary*.
FULTON, February, 1861.

WAMPUN RESOLUTIONS.

At a meeting of Prof. Wells' class, held on Tuesday evening, Dec. 10th, 1861, Mr. E. Barker was called to the Chair, and Rev. I. M. Walker was chosen Secretary. The object of the meeting was then stated by the Chair, after which Messrs. A. B. Randall (Chaplain of the Wisconsin State Prison), I. M. Walker and E. T. Grace were appointed a committee to draft resolutions expressive of the views of the meeting. The following preamble and resolutions were reported and unanimously adopted:

Whereas, We, the members of Prof. W. R. Wells' class, having attended his course of lectures on electropathy, in this place, desire to express our views of the Doctor as a scientific lecturer, and our appreciation of his theory and method of cure; therefore,

Resolved, That we believe that the Doctor's theory of disease is in many respects *novel*, yet scientific and rational, and much more certain in the diagnosis of disease than the previous systems of practice.

Resolved, That in our acquaintance with Prof. Wells he has shown himself to be a Christian and a gentleman, as well as a scientific man, and that he has the most happy faculty of instructing his classes; and if any one fails to understand him, it is his own fault and not the Professor's.

Resolved, That we commend the Professor and his accomplished lady to the confidence of all, but especially to the afflicted invalid; and his new theory of disease and cure to the candid consideration of all.

Resolved, That a copy of the above resolutions be presented to the editor of the Times for publication, and also to the Professor.

E. BAEKER, *Chairman.*

Rev. I. M. WALKER, *Secretary.*

WAMPUN, WIS., Dec. 10th, 1861.

SYRACUSE RESOLUTIONS.

After listening to Prof. Wells' course of Lectures, delivered in this city, the members of the class organized by calling A. V. K. Snyder, M. D., to the Chair, and Judge G. H. Middleton, Esq., Secretary; whereupon the following preamble and resolutions were *unanimously* adopted, and a copy ordered to be presented to the Doctor:

Whereas, Prof. W. R. Wells, M. D., has delivered a course of lectures before us, as members of his class, on the subject of electricity as a remedial agent; and whereas, the importance of the system of electropathy, considered in the light in which it has been so ably presented before us, deserves our highest commendation; therefore,

Resolved, That we have listened with the deepest interest to the Doctor's course of lectures. His theory of disease and method of cure are *original and highly interesting*; also *rational* and *scientific*, and wonderfully successful in the many cases treated in our city.

A. V. K. SNYDER, *Chairman.*

G. H. MIDDLETON, *Secretary.*

WM. H. CHIDDESTER, M. D.,

E. ANDREWS, M. D.,

and a class of 45.

SYRACUSE, March 27th, 1861.

JANESVILLE RESOLUTIONS.

Whereas, Having attended a course of lectures by Prof. W. R. Wells, M. D., at the Myers House, in this city, demonstrating that the human body in health is a perfect compound electrical magnet,

and that the positive and negative forces are balanced, and that disease consists in a disturbance of these forces; therefore,

Resolved, That although we commenced listening to these lectures full of doubt, our skepticism was soon removed, and with increasing confidence we have heard the course, and are fully prepared to endorse his system of *diagnosis*, and also believe that in all *chronic diseases*, and in many acute diseases, the principles of electropathy, as unfolded by the Professor, are the safest, *most certain* and promptest method of relief and cure; and we feel at a loss to find language to express our high appreciation of his most valuable instruction, and recommend his subject as of great value to the profession and the public.

Resolved, That we are highly pleased with the Doctor and lady, for their urbanity, kindness, and interest manifested in imparting information to the class.

G. W. CHITTENDEN, M. D., *President.*
S. P. COLE, M. D., *Secretary*, and 44 others.
JANESVILLE, Wis., Feb. 26th, 1862.

The following are a few notices of the many hundreds which the Professor has received from the Press, where he has lectured:

ELECTROPATHY.—Prof. Wells is instructing a large and intelligent class of ladies and gentlemen in our city, in the science of Electricity as applied to the human system. In his class we are glad to notice many of our most respected citizens, and among them several of the medical profession. Prof. W. has awakened a lively interest in this community in the science which he has so thoroughly mastered. We commend him and his esteemed lady to the confidence and patronage of all lovers of science, and all who desire to become acquainted with the marvelous and beneficent uses of this most subtle of all elements, Electricity.—*La Crosse Republican.*

ELECTROPATHY.—The Globe Hotel is literally thronged, day and evening, with those of our citizens interested in Dr. Wells' science of cure through the agency of Electricity. Hundreds of anxious patients and their friends come to test his theory of disease, and learn the method of cure. He has a large class under instruction, to whom he is nightly revealing the astonishing secrets of Electricity.—*Syracuse Daily Journal.*

We learn by the Syracuse papers that Prof. Wells, the Electrician (formerly of our city), is lecturing in that place. He is the man to succeed.—*Buffalo Advocate.*

Dr. Wells' Lectures.—The lectures by Dr. Wells, at the Globe, are attended by a large and interested class. His expositions of the laws of Electricity, and their application to diseased organs, are clear and forcible. Many gentlemen think they know all that the Doctor knows on this subject. Some of them are certainly in error, as they will be convinced by hearing his lectures and witnessing his illustrations.—*Syracuse Daily Courier.*

Prof. Wells and Electropathy.—Prof. Wells has been spending a few weeks in our town, demonstrating an entirely new theory of disease and method of cure. The Professor has instructed a large and intelligent class of ladies and gentlemen, who, as will be seen in another column, are highly gratified with both his theory and the practical workings of it. Such is the anxiety expressed by the citizens of Wampun and vicinity for a second course of Lectures on Electropathy, that the Professor has consented to remain and deliver another course. The worst of cases, and the most hopeless by other methods of treatment, are readily cured by him.

[*Wampun Times.*